Maine Women's Health Report

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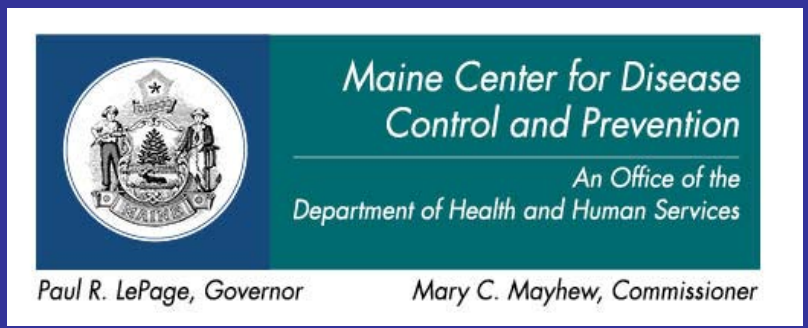

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The Maine Women's Health Campaign (MWHC) is a public and private sector partnership founded in 1996 to enhance the health and well-being of women and girls in Maine. MWHC's mission is to encourage and support an environment that enhances Maine women's and girls' health by:

- Creating and supporting policies at the local, statewide and institutional levels that will improve access and availability to comprehensive services;
- Engaging, informing and networking individuals and agencies invested in improving Maine women and girls' health;
- Expanding and supporting existing programs;
- Fostering and sustaining innovative programs and inter-organizational collaboration;
- Promoting innovations and best practices in data collection and analysis, program planning, service delivery and evaluation;
- Advancing a multi-disciplinary vision of women's health across the lifespan.

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Introduction

Although women make up over half of the U.S. population, their unique health needs have not received adequate attention in medical and public health research and practice. A 1985 report by the Department of Health and Human Services, *Women's Health: Report of the Public Health Service Task Force,* concluded that health care and health information provided to women was compromised due to the lack of research on women's health issues.[1] Since this report, there have been significant advances in research on women's health, which have led to improved prevention, diagnosis, intervention and health outcomes for women, but there are still areas where little progress has been made.

The goal of this report is to provide data on major health concerns among women in Maine in order to inform, educate, and improve women's lives. The health indicators documented here provide a useful baseline for understanding women's health. This report provides the up-to-date information on women's access to care, physical and mental health status, reproductive health, substance use and abuse, chronic disease, injury, as well as health activities and use of preventive services.

Key Findings

Demographics

- **Maine's female population is older than most other states.** In 2009, Maine's median age was 42.2 years, the oldest in the country. The median age for women in Maine was 43.4 years.
- **Maine's female population has become more racially diverse over the last decade.** Between 2000 and 2009, the percentage of Black females in Maine increased from 0.45% to 0.99%, a 117% increase. Similarly, the population of American Indian females increased 8.9%, Asian females increased 31.6%, and Hispanic females increased 89.6%.
- **More than half of women in Maine over the age of 25 have at least some college education.** However, close to ten percent (9.6%) of all Maine women have not obtained a high school diploma.
- **Whether as a result of not choosing to marry, divorce, or being widowed, many Maine women are living alone today.** Fifteen percent of Maine households are headed by single women and 6% are headed by single men.

Socio-Economic Status

- **Younger women aged 16-24 outnumbered young men in Maine's labor force in both 2008 and 2009.** In all other age groups, there were more men than women working in Maine.
- **More than 3 out of 4 women with children in Maine work outside of the home.** According to data from the 2005-2009 American Community Surveys, 35% of Maine women aged 20-

64 years had children less than 18 years of age at home. More than three-quarters (76.8%) of these women reported that they were currently working.

- **Maine women's earnings lag behind those of men, this trend becomes more pronounced as women age.** In 2009, the median income for Maine males of all ages and occupations was $42,156 and for Maine females it was $32,314.
- **Poverty is a challenge facing many Maine women, especially older women and women with children**. Between 2005-2009, 12.2% of Maine women 65 years or older lived below the federal poverty level, compared to only 6.7% of men 65 years or older. In Maine, between 2005 and 2009, an estimated 8.6% of families lived in poverty. Among female-headed single parent families with children, 39.3% were living in poverty compared to 5.5% of married couples with children and 20.6% of families with male head of household with children.

Reproductive Health

- **Between 2000 and 2009, the population of women of reproductive age living in Maine decreased 8.1%.** In the U.S., there was a 0.5% decline in women of reproductive age during this same time period.
- **Of the reported sexually transmitted diseases, chlamydia is the most frequently reported in Maine and the number of reported cases has increased in recent years.** In 2009, the number of reported cases declined for the first time since 2001. Between 1996 and 2009, the number of chlamydia cases in Maine increased from 965 to 2,443.
- **Of Maine women who gave birth in 2009, 88% initiated prenatal care in the first trimester of their pregnancy and more than 85% received adequate prenatal care.** Since 2003, these figures have remained fairly stable. Between 2005-2009, women were less likely to receive early prenatal care if they were younger, less educated, or a race other than white.
- **More than one in four (26.8%) new Maine mothers in 2009 were classified as obese before their most recent pregnancy;** 13.5% were classified as overweight, and 7.7% of women were classified as underweight.
- **More than 1 in 5 Maine women (21.2%) reported smoking during the last 3 months of pregnancy**, and 26.1% reported continuing, resuming, or beginning smoking after giving birth. Smoking during pregnancy was associated with younger age, lower educational attainment and low income.
- **More than half of all births in Maine in 2009 were to women with education beyond high school compared to 23.3% of 2008 births in the U.S.** In Maine, 1 in 10 births (10.8%) were to women with less than a high school education, compared to 1 in 4 births (26.4%) in the U.S.
- **In 2008, only five states reported lower adolescent birth rates than Maine**. The 2008 birth rate for adolescents aged 15-19 in the U.S. was 41.5 per 1,000; the Maine rate in 2008 was 25.3 per 1,000.
- **In 2009 more than 1 in 3 (39%) new Maine mothers reported that the birth of their most recent child was unintended.** Unintended birth was associated with age, income and educational attainment.
- **Seventy percent of new mothers in Maine who experienced intimate partner violence around the time of pregnancy were not trying to get pregnant at the time they conceived.**

About 1 in 20 new mothers experienced domestic violence (DV) by a partner prior to or during their most recent pregnancy. Almost 1 in 3 (29.4%) new mothers in Maine who experienced DV around the time of pregnancy were diagnosed with post-partum depression, compared to 12.5% of women who were not DV victims.

- **Rates of Cesarean delivery have increased by more than 40% over the past decade in Maine and the U.S.** Nearly seven in ten Maine births in 2009 were delivered vaginally and approximately 30% by Cesarean section (C-section). Maine's 2009 C-section rate was similar to the U.S. 2008 C-section rate of 32.3%.
- **About three out of every four (75.2%) children born in Maine in 2007 were ever breastfed**. About half (48.2%) of children born in Maine in 2007 were breastfed for at least 6 months and 18.2% were exclusively breastfed for 6 months.
- **More than 1 in every 10 (11.3%) new mothers in Maine reported symptoms of depression after the birth of their most recent child**. Postpartum depression was more common among younger mothers, mothers with lower levels of educational attainment and income, unmarried mothers and those enrolled in MaineCare. Mothers who reported that their pregnancy was unintended were almost two times more likely than mothers with intended pregnancy to report symptoms of depression after the birth of their child.

Chronic Disease

- **Asthma is more prevalent among women compared to men in Maine and in the U.S.** Approximately one in eight Maine women (13.4%) have been diagnosed with asthma and still have asthma. Women are also more likely to be hospitalized for asthma compared to men. The gender gap in asthma hospitalizations increases with age.
- **Chronic Lower Respiratory Diseases are the fourth-leading cause of death among females in the U.S. and in Maine.** On average, approximately 400 women die from COPD each year.
- **Lung cancer is the leading cause of cancer-related death for women in Maine and the U.S**. Breast cancer is the second leading cause of cancer-related death among women.
- **Compared to the U.S. women, Maine women had a higher incidence of the leading cause of cancer-related deaths, lung cancer.** The incidence rates of ovarian cancer, colorectal cancer and breast cancer in Maine were not statistically different from the U.S.
- **Between 2005-2009, women were less likely than men to die from heart disease. Women's mortality rate due to stroke was not significantly different than men's except among women 85 years or older, where mortality was higher**. Mortality rates associated with these conditions increased with age.
- **About 8% of women in Maine have diabetes**. Diabetes was associated with higher age, lower income and lower educational attainment.
- **More than 1 in 5 women over age 65 have had all of their natural teeth extracted**. The percent of Maine women who saw a dentist within the past year ranged from 79.4% to 63.3% depending on the age group.

Executive Summary

Injury

- **Unintentional injury is the 6th leading cause of death among all females in Maine and the leading cause of death among women between the ages of 15 and 44 years.**
- **Although men are more likely to die as the result of an injury compared to women, women have higher rates of injury-related hospitalizations.** Injury mortality and hospitalization rates are highest among men and women over age 85.
- **Motor vehicle crashes were the leading cause of injury deaths among Maine females between 2004-2008,** followed by unintentional poisoning, unintentional unspecified injuries, unintentional falls, and unintentional suffocation. Suicide-related injury was the 6th leading cause of injury death and homicide was the 10th leading cause of injury death among females of all ages in Maine.
- **Falls were the leading cause of injury-related hospitalizations for both females and males in Maine between 2004-2008**. Self-inflicted poisoning was the second leading cause of injury-related hospitalization among females.
- **Annually, over 7,500 women in Maine (1.5%) are physically or sexually assaulted by an intimate partner**. On average, about 45% of homicides in Maine each year are related to domestic conflicts.
- **About 1 in 6 Maine women (16.2%) have ever been the victim of rape or attempted rape during their lifetime**; 1.5% of women reported a rape or attempted rape in the past year. In 2009, there were 374 rapes reported, a rate of 5.5 per 10,000 females.
- **More than 60% of women in Maine experienced an adverse childhood experience and more than 1 in 10 experienced five or more.** Almost 1 in 5 Maine women reported being sexually abused during childhood.

Mental Health

- **More than 1 in 4 women in Maine have ever been diagnosed with depression.** The percentage of Maine women diagnosed with depression decreased as age, education, and income increased.
- **In 2009, Maine women were almost two times more likely than men to report ever having been diagnosed with anxiety disorder (21.0% vs. 11.8%).**
- **Hospitalizations for depression among Maine men and women decreased between 1999-2009**; women were more likely than men to be hospitalized for depression during this period.
- **Education and income were inversely related to unhealthy physical and mental health days per month**. Women who had not graduated from high school reported more than two times the number of mentally unhealthy days and three times the number of physically unhealthy days per month compared to women with a college degree.

Substance Abuse

- **Approximately half as many Maine women as men reported binge drinking in the past month (10.6% vs 19.9%).** The prevalence of Maine women who binge drank in the past month was similar to that of the national average. The prevalence of binge drinking did not vary by educational attainment or income.

- **For both Maine men and women the prevalence of binge drinking decreased with older age**. Over 20% of women aged 18-24 had a binge drinking episode over the past 30 days, compared to 14% for those aged 35-44 years, and 5% for those aged 55-64 years.
- **Over the past ten years, rates of hospitalizations related to alcohol abuse peaked for Maine men and women (in 2004) but then decreased significantly**. The rate of hospitalizations for alcohol have been consistently lower among women compared to men over time, but the size the gap between males and females has diminished in recent years.
- **The number of female clients served by Maine's substance abuse treatment facilities increased 50% between 2000 and 2010.**
- **Over 70% of women at substance abuse treatment facilities were being treated for alcohol or other opiates and synthetics.** Almost 40% were being treated for alcohol abuse and one-third of women were being treated for other opiates and synthetic drugs.
- **The number of pregnant clients seeking substance abuse treatment in Maine increased from 111 in 2001 to 251 in 2010, a 125% increase.** The increase could reflect an increased number of women abusing drugs, or increased awareness in women and providers of the harmful effects of drugs in utero.

Health Risks and Health Promotion

- **In 2009, almost 60% of women in Maine in 2009 were overweight or obese**; 30.5% of Maine women were overweight and 26.9% were obese. The prevalence of obesity in Maine women has been increasing steadily over time. Obesity increased from 19.7% in 1999 to 22% in 2005 and 27% in 2009; this is similar to prevalence trends in the U.S.
- **In 2009, 54% of Maine women met the recommendation for moderate or vigorous physical activity.** Activity levels are lower in women who are older, and who have less education. The percentage of women who met the vigorous activity recommendations increased steadily with income.
- **Maine women were more likely than men to report eating at least five servings of fruit and vegetables each day.** About 1 in 3 (34%) of Maine women consumed 5 or more servings of fruits and vegetables per day, compared with 21% of men.
- **About 16% of adult women in Maine report that they smoke cigarettes.** Approximately 33% of Maine women who did not graduate from high school are current smokers, compared to 8% of women who graduated from college or technical school.
- **Over 80% of women in Maine aged 40 or older had a mammogram within the past 2 years.** Women with less than a high school education and women with lower incomes were less likely to have had a recent mammogram.
- **Breast cancer screening rates have increased in Maine in recent years.** The percentage of Maine women aged 40 or older who had mammograms within the past 2 years increased from 81.8% in 2006 to 83.3% in 2008.
- **Over 80% of women in Maine have had a pap smear in the past three years.**
- **The proportion of Maine men and women having colonoscopies or sigmoidoscopies increased between 2006 and 2008**. There were no sex differences in the prevalence of screenings for colorectal cancer. The percentage of Maine women who had a colorectal screening was higher than the U.S.

Access to Care

- **In Maine, one in ten (10.8%) women reported that in the past year they needed to see a doctor, but could not because of cost.**
- **About 1 in 5 women aged 18-24 did not have a primary care provider.**
- **In Maine, 12% of women do not have health insurance, which earns the state a rank of 11th best in the nation in terms of insuring women.**

Conclusion

This report examined women's health in Maine and the factors that contribute to women's health and well-being. The findings of this report indicate that although substantial gains have been made in ensuring women in Maine are healthy, disparities still exist and women continue to face challenges that carry health risks. Although this report focuses on women, it is important to realize that by improving women's health and health care for women, we will strengthen women, their families, and our communities. As the World Health Organization noted in their 2009 report on women's health, "Improve women's health, improve the world."[2]

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Background and Introduction

Why Women's Health?

As a result of differences based both in biology and socially constructed gender roles, being born a male or a female can have a significant impact on a person's health over his or her lifetime. The health of women and girls is of particular concern because in many societies (including the U.S.) women face discrimination based on gender norms and expectations. According to the World Health Organization, women's health and the quality of health care provided to women is impacted by:[1]

- Unequal power relationships between men and women
- Social norms that decrease education and paid employment opportunities
- Exclusive focus on women's reproductive roles
- Potential or actual experience with physical, sexual and emotional violence

Women also have a unique biological makeup that may make them more vulnerable to certain health conditions and outcomes. Women tend to live longer than men, and they are also susceptible to different chronic diseases (e.g., ovarian and breast cancer).

Although women make up over half of the U.S. population, women's unique health needs have not received adequate attention in medical and public health research and practice. A 1985 report by the Department of Health and Human Services, *Women's Health: Report of the Public Health Service Task Force,* concluded that health care and health information provided to women was compromised due to the lack of research on women's health issues.[2] Since this report, there have been significant advances in research on women's health, which have led to improved prevention, diagnosis, intervention and health outcomes for women. According to a 2010 Institute of Medicine (IOM) report, significant improvements in women's health have been made in the mortality and morbidity of specific conditions, such as breast cancer, cardiovascular disease, and cervical cancer; some progress has been made in depression, HIV/AIDS and osteoporosis, but little progress has been made on conditions such as unintended pregnancy, maternal morbidity and mortality, alcohol and drug addiction, and lung cancer. The authors of the IOM report recommend ongoing gender-based analyses and effective communication of findings related to women's health.[3] The goal of this report is to provide data on major health concerns among women in Maine in order to inform, educate, and improve women's lives.

Public Health in Maine

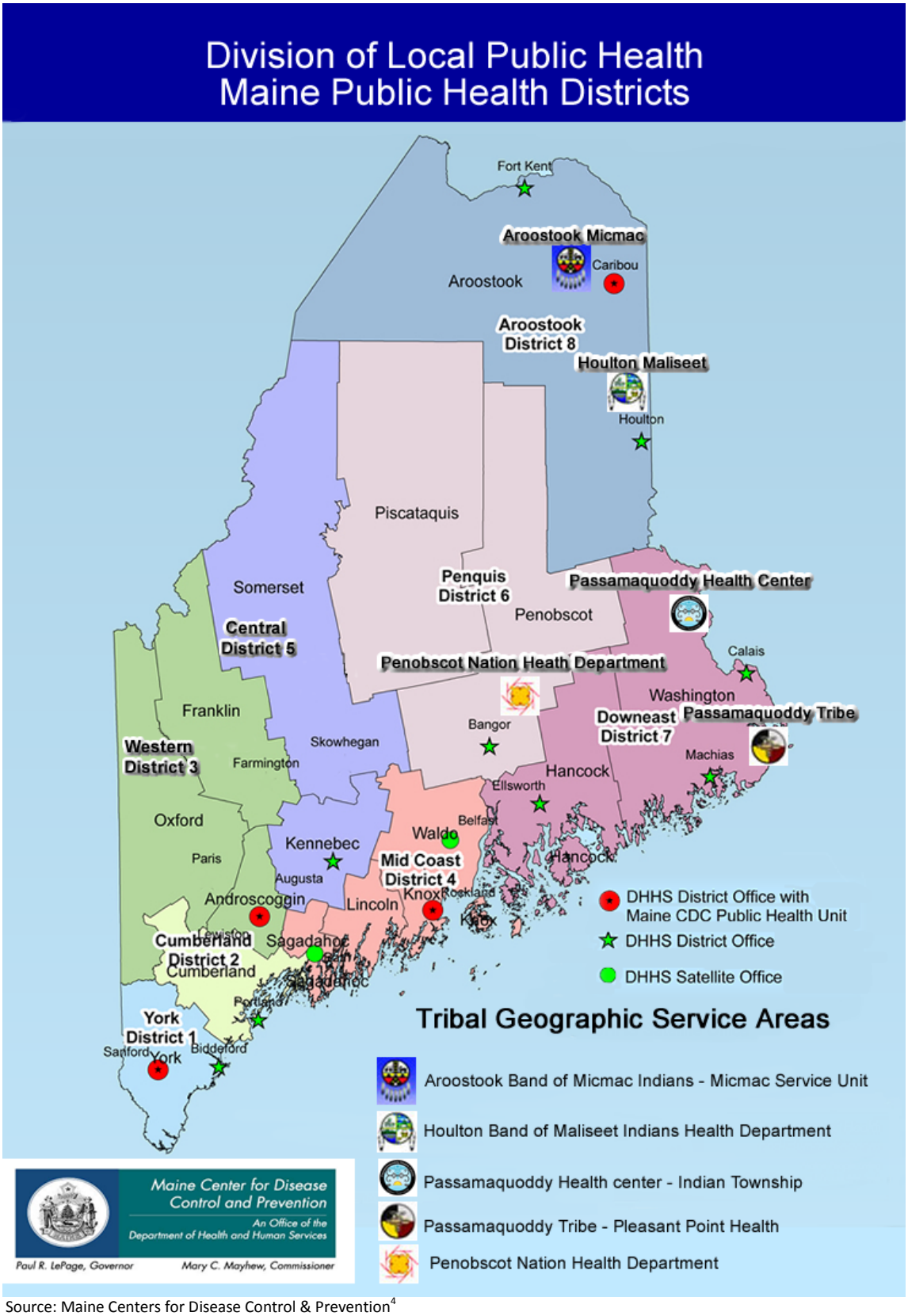
Maine is the northernmost and largest state in New England and the easternmost state in the U.S. Maine's population is growing at a slower rate than most of the U.S., but aging at a faster rate. Although 80% of American residents reside in metropolitan areas, the majority of Maine's population resides in rural towns and small cities.

Most public health functions in Maine are concentrated at the state level. Although the 2 largest cities (Portland and Bangor) have local public health departments, the state does not have any

county health departments. In 2006-2007, a statewide public health infrastructure was developed to improve the efficiency and effectiveness of the state's public health capacity. The infrastructure that emerged that includes nine public health districts that take into account population, geographic spread, hospital service areas, and county borders (Figure a.1). Throughout this report, we present data by public health district when available. The nine Public Health Districts are:[4]

District	Counties/Tribes Included
York	York County
Cumberland	Cumberland County
Western	Androscoggin, Franklin, and Oxford Counties
Midcoast	Waldo, Lincoln, Knox, Sagadahoc Counties
Central Maine	Somerset and Kennebec Counties
Penquis	Penobscot and Piscataquis Counties
Downeast	Washington and Hancock Counties
Aroostook	Aroostook County
Tribal District	Aroostook Band of Micmacs, Houlton Band of Maliseet Indians, Passamaquoddy Tribe of Indian Township, Passamaquoddy Tribe at Pleasant Point, Penobscot Nation

Figure a.1. Maine's Public Health Districts



Source: Maine Centers for Disease Control & Prevention[4]

About this Report

The goal of this surveillance report is to provide the state of Maine with current and comprehensive data on women's health. The report includes information on incidence and mortality rates of major causes of death, disease and injury, as well as information on risk factors and behaviors. Health-related data systems were analyzed to provide up-to-date information on women's access to care, physical and mental health status, substance use and abuse, chronic disease, injury, as well as health activities and use of preventive services. The health indicators documented here provide a useful baseline to understand women's health and well-being. This report is not intended to fully explain the complex web of sociological, economic, and biological causes that contribute to the incidence of injury, death, disease, or health disparities.

This report is an update to the 2002 report: *Women's Health: A Maine Profile.* The current report focuses on adult women, defined as females aged 18 and older. Throughout this report, we use the term "sex differences" to refer to differences between men and women. According to the World Health Organization:[5] "Sex" refers to the biological and physiological characteristics that define men and women. "Gender" refers to the socially constructed roles, behaviors, activities, and attributes that a given society considers appropriate for men and women. This report includes data on health risks and illnesses related to biologic sex, as well as socially constructed gender roles. For consistency we have chosen to use the term "sex" throughout the report, but we acknowledge the complex forces-- both biological and social--that impact women's health. The terms "female" and "male" are used in the narrative of the report to refer to persons of all ages; the terms "women" and "men" are used to refer to adults.

Throughout the report, we try to report on health disparities. Unfortunately, most of the data systems in Maine do not include adequate numbers of women to report data by race and ethnicity. Based on national data, we know that there are substantial health disparities by race and ethnicity. For information on racial and ethnic disparities in women's health based on U.S. data, we encourage you to visit the National Office of Women's Health website, "Quick Health Data Online" at http://www.healthstatus2010.com/owh/index.html.

Leading Causes of Death Among Maine Women

The leading causes of death among women in Maine between 2004 and 2008 were cancer, heart disease, cerebrovascular disease (stroke), chronic lower respiratory disease, and Alzheimer's (Table a.1).[6] The leading causes of death among women in Maine varied by age (Table a.1). Among women of reproductive age (15-44) the leading cause of death between 2004 and 2008 was unintentional injury, followed by cancer. Suicide was the third leading cause of death among women aged 15-24 and the fourth leading cause of death among women aged 25-44 years. Homicide was the fifth leading cause of death among young women, but was not among the five leading causes of death among women in other age categories. Diabetes was one of the top five leading causes of death among women aged 25-64 years. Among Maine's oldest population of women (aged 65+), heart disease was the leading cause of death, followed by cancer.

Table a.1. Five leading causes of death among females in Maine overall and by age, 2004-2008

Rank	Overall (ages 1-85+)	15-24	25-44	45-64	65+
(Total deaths)	(31794)	(195)	(783)	(4068)	(26677)
1	Cancer (n=6427)	Unintentional Injury (n=97)	Unintentional Injury (n=203)	Cancer (n=1892)	Heart Disease (n=6401)
2	Heart Disease (n=5892)	Cancer (n=18)	Cancer (n=186)	Heart Disease (n=550)	Cancer (n=5320)
3	Cerebrovascular Disease (n=2169)	Suicide (n=18)	Heart Disease (n=78)	Chronic lower respiratory disease (n=212)	Cerebrovascular Disease (n=2031)
4	Chronic lower respiratory disease (n=2018)	Heart Disease (n=11)	Suicide (n=56)	Unintentional Injury (n=203)	Chronic lower respiratory disease (n=1794)
5	Alzheimer's (n=1739)	Homicide (n=8)	Diabetes (n=23)	Diabetes (n=138)	Alzheimer's (n=1720)

Source: Maine Vital Records Data[6]
Note: Unintentional injury includes motor vehicle crashes

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Technical Notes

Glossary

Age-Adjusted Rate: Age-adjustment is a method used to better ensure comparability of estimates (e.g., rates) with respect to age. The age distribution of a population may change overtime and differ from place to place. Because some health conditions or diseases are more common in certain age groups of people, it can be misleading to compare rate or prevalence estimates of populations if the age distributions of the populations compared are different. A rate is age-adjusted by applying age-specific rates in the population of interest to the U.S. 2000 Census standard population. Age-adjusted rates are relative, and should not be considered exact rates that necessarily represent the true underlying burden of disease in the population. Additional information on age-adjustment is available at: www.cdc.gov/nchs/data/statnt/statnt06rv.pdf or www.cdc.gov/nchs/data/statnt/statnt20.pdf.

Confidence interval: Confidence intervals quantify the degree of uncertainly in rate or prevalence estimates that results from sampling or random variability. The confidence interval presents a range of values within which the true underlying rate or prevalence is likely to lie. The 95% confidence interval is most commonly used, and is presented in this report. In this report, we base our determination of statistical significance on whether the confidence intervals of compared estimates overlap. Non-overlapping confidence intervals are considered statistically significant.

Death (mortality) rate: The number of deaths during a specific period of time divided by the size of the population during that period of time. The result is often multiplied by a constant, such as 100,000, to represent the number of deaths per 100,000 people.

Incidence: The rate with which new cases of disease have developed, over a defined period of time, from within a previously disease-free population.

Infant mortality rate: The number of children in a population who die before their first birthday divided by the number of live births in that population during the same time period.

ICD-9 and ICD-10: The ninth and tenth revisions of the International Classification of Diseases, the classification system used to code and classify causes of death. ICD-9 was in use between 1979 and 1998; ICD-10 has been in use since 1999.

Median: The median is the number in the middle of a listing of all values by magnitude. This differs from the mean (sometimes called the average), which is a sum of all values divided by the number of values. For example, if a sample of 5 individuals report that their daily fruit & vegetable consumption is 3, 5, 8, 9, and 10 servings, we calculate a median of 8 and a mean of 7.

Mortality: A fatal outcome, death.

Percentage: A ratio where the value for the numerator is included in the total denominator. Prevalence is a percentage. The prevalence of diabetes is the number of people with diabetes divided by the entire population, with and without diabetes.

Prevalence: The percent of the population with a particular condition or characteristic. It is calculated as the number of people in a population who have a health condition divided by the total number of people in the population.

Public Health Districts: Regions created for the purposes of data, planning, administration, funding allocation, and the effective and efficient delivery of public health services.
Aroostook District = Aroostook County
Central District = Kennebec and Somerset Counties
Cumberland District = Cumberland County
Downeast District = Hancock and Washington Counties
Mid Coast District = Knox, Lincoln, Waldo, and Sagadahoc Counties
Penquis District = Penobscot and Piscataquis Counties
Western District = Androscoggin, Franklin, and Oxford Counties
York District = York County
Tribal District= Aroostook Band of Micmacs, Houlton Band of Maliseet Indians, Passamaquoddy Tribe of Indian Township, Passamaquoddy Tribe at Pleasant Point, Penobscot Nation

Rate: A measure of new events or occurrences in a population. The crude rate is calculated as the number of events per time period divided by the total number of people in the population in the same time period. The crude rate represents the actual burden of disease in the population.

Significant differences: In this report, an assessment of significant difference between two estimates, also called statistically significant difference, is based on whether the estimates' 95% confidence intervals (95% CIs) overlap. Overlapping confidence intervals means that the margin of errors of each estimate overlap—thus, the estimates cannot be assumed to differ. Confidence intervals that do not overlap means that each estimates' margin of error lies outside the margin of error of the other estimate(s)—thus, estimates are assumed to differ.

Standard population: A population whose known age distribution is used to create comparable statistics (e.g., rates) for populations with different age distributions. In this report, the standard population used to produce age-adjusted rates was the total U.S. population as measured by the year 2000 Census.

Frequently Used Data Sources

American Community Survey (ACS): The ACS is a mail survey that provides demographic, socio-economic, and housing information about communities in between the 10-year census.
The ACS is conducted by the U.S. Census Bureau. The survey is sent to a sample of households in the United States. Households that receive the survey are required by law to complete it.
Additional information about the ACS is available at: www.census.gov/acs/www/.

Technical Notes

Behavioral Risk Factor Surveillance System (BRFSS): The BRFSS is an annual, statewide telephone survey conducted and coordinated by the states, and supported by the federal Centers for Disease Control and Prevention (CDC). The survey was designed to collect uniform, state-specific data on preventive health behaviors and risk factors that are associated with the leading causes of morbidity and mortality. Randomly selected, residential, non-institutionalized adults aged 18 and older are interviewed. Survey data for estimates are weighted to be a representative sample of the state adult population. One aspect of the weighting is the expected response rate by sex and age of the participant. For example, if 1 in 150 female residents between the ages of 18 and 24 were surveyed, then each female participant within this age group is weighted to represent 150 people. It should be noted that responses are voluntary and based on self-reporting.

Documented errors exist in the ability of the BRFSS to accurately reflect certain population indicators. For example, the prevalence of overweight/obesity obtained from the BRFSS through self-reporting is an underestimate when compared to national data based on direct measurement of individuals by trained survey staff. Additional details regarding the design and analysis of the BRFSS data are available at www.cdc.gov/brfss.

Hospital discharge datasets: The hospital discharge datasets include all hospitalizations and emergency department visits in Maine facilities. Analyses for this report were restricted to Maine residents. The datasets are maintained by the Maine Health Data Organization (MHDO), which was established by the legislature in 1996 to collect and maintain "clinical and financial health care information and to exercise stewardship in making this information accessible to the public."

Maine Health Data Organization (MHDO): In 1996, the Maine Legislature established MHDO as an independent organization to collect and maintain "clinical and financial health care information and to exercise stewardship in making this information accessible to the public" (http://mhdo.maine.gov/imhdo/). The MHDO is responsible for the emergency department and inpatient hospitalization data utilized in this report.

Maine Vital Records: A unit within Maine CDC charged with collecting data on births and deaths within the state and among Maine residents. Raw data from Vital Records are processed by the statistical service unit to produce analysis-ready datasets.

Pregnancy Risk Assessment Monitoring System (PRAMS): Funded by the CDC, PRAMS is a state-wide representative survey of new mothers that is currently conducted in 37 states. It has been conducted on an ongoing basis in Maine since 1987. The survey collects data on maternal experiences and attitudes before, during, and shortly after pregnancy. The estimates derived from PRAMS are weighted to be representative of women who have recently delivered live-born infants in the state. For more information about the national PRAMS project, please visit: www.cdc.gov/prams/. For information about PRAMS in Maine, visit www.maine.gov/dhhs/bohodr/prams.htm.

U.S. Census Bureau: The Census Bureau provides data on the people and the economy of the United States. Further information about the bureau's activities can be found at: www.census.gov/.

Chapter 1: Demographic and Socioeconomic Profile

Race & Ethnicity, Income, Age, Marital Status, Employment

Introduction

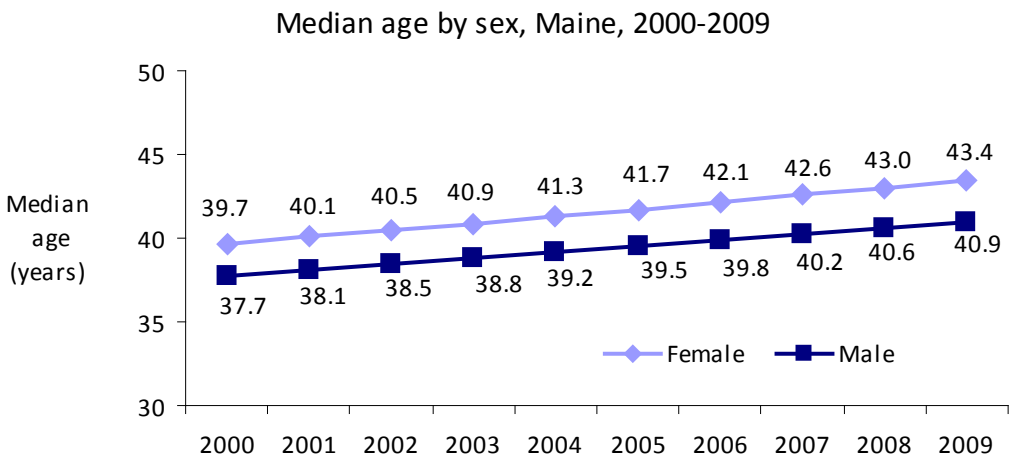
Approximately half of Maine's population (51.2%) is composed of women.[1] In this chapter we describe the major demographic characteristics that can affect the health of women in Maine, such as age, geographical location, income, household composition, and education. As a group, women face a unique set of threats to their health and well-being which stem from their collective and individual conditions, be they physical, social, and economic.

Demographic Profile

Age

As women age, they are more likely to experience chronic health problems and report fair or poor health.[2] The median age of Maine's population (for both men and women) has been increasing over the last decade; however women have consistently had a higher median age than men (Figure 1.1).[3]

Figure 1.1.



Source: US Census Bureau[3]

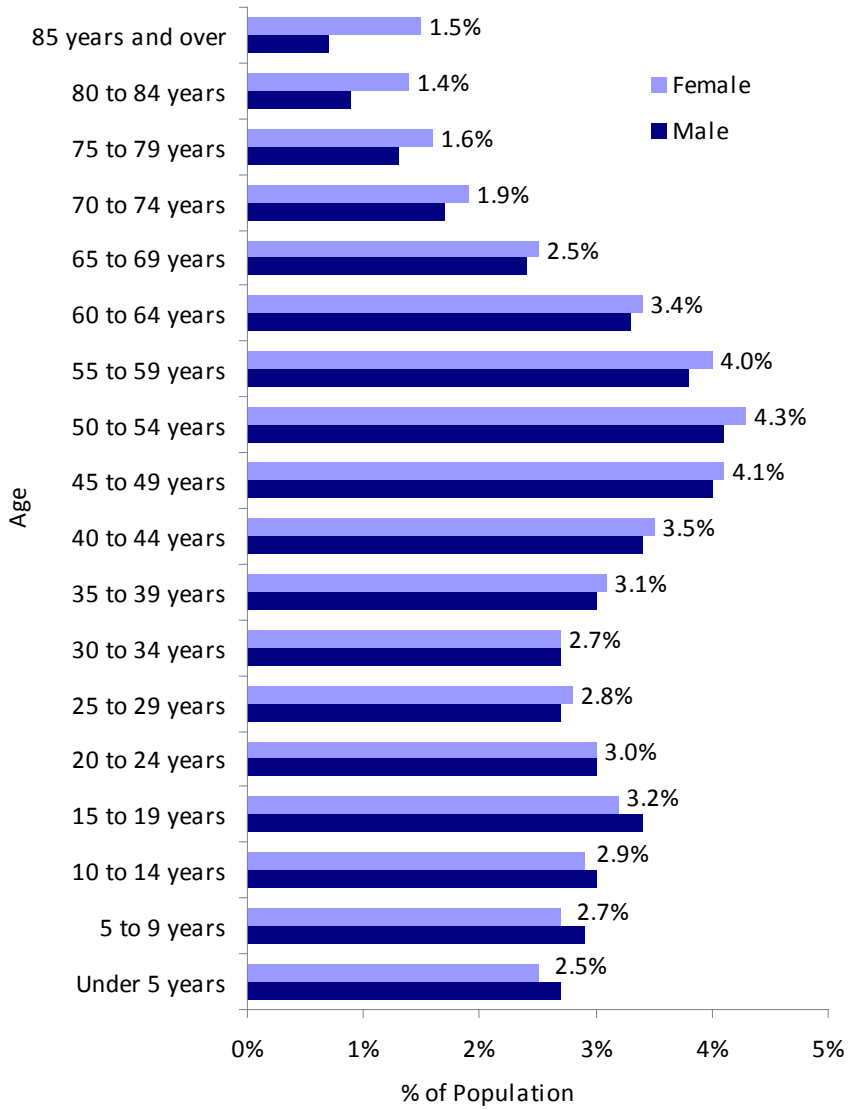
In 2009, Maine's median age was 42.2 years, the oldest in the country.[3, 4] The median ages for women and men in Maine were 43.4 and 40.9 years, respectively.[3] That same year, 15% of the state's population was 65 years and older, compared to 12.9% nationally. Among women, 17.2% were 65 years and older; among men, 13.8% were age 65 years or older. Maine is predicted to become the "oldest state in the nation" by 2020, as defined by percentage of the population older than 65.[1, 4]

Maine had the second-smallest percentage of the population under the age of 18 in the country (20.6%) in 2010.[1, 4] Maine's younger population is comprised of more males than females in each

age group younger than 20 years. This trend is reversed at the other end of the lifespan with females comprising a larger percentage of the population in each age group older than 35 years (Figure 1.2).[5] Women live about five years longer than men on average. According to U.S. data from 2007, the average life expectancy for women born in 2007 in the U.S. is 80.4 years; men born in 2007 are expected to live 75.4 years on average.[6]

Figure 1.2.

Age distribution of population by sex, Maine, 2010



Source: US Census Bureau[5]

Geographic Distribution of Maine's Population

Although 80% of American residents reside in metropolitan areas, the majority of Maine's population resides in rural towns and small cities. Statewide, 59.8% live in rural areas, compared to 21.0% of the U.S. population.[7] Rural life makes many women geographically isolated, meaning

they live in areas of the state where there are fewer numbers of services such as medical care providers.

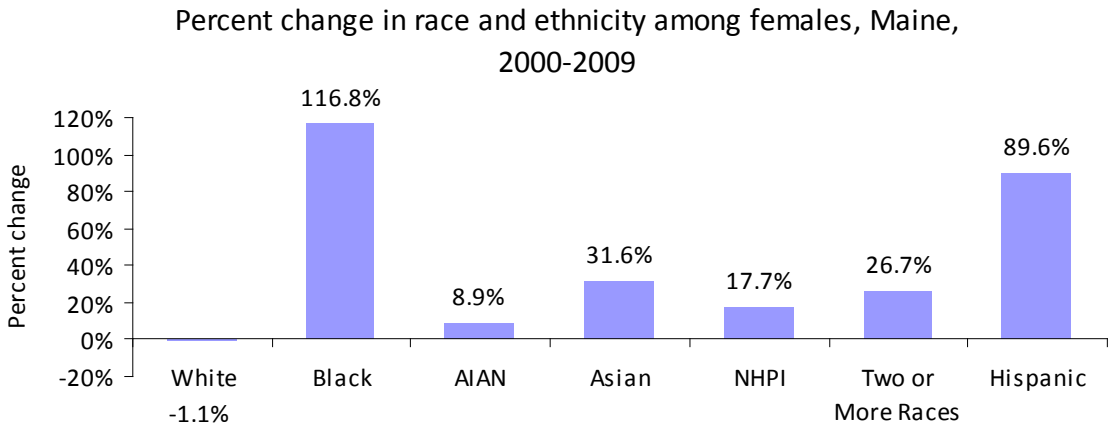
Maine has 16 counties with vastly different population densities. More than one third (36.3%) of Maine's population lives in the two southernmost counties of Cumberland and York. Approximately 34%-54% of the residents of these counties live in a rural area. In comparison, six of Maine's counties have 75% or more of their residents living in rural areas, and two counties (Piscataquis and Lincoln) have 100% of residents living in rural areas.[7] Unfortunately, sex-specific data on Maine's rural population are not currently available.

Racial and Ethnic Diversity

Compared to the rest of the U.S., Maine has a relatively homogeneous population in terms of racial and ethnic diversity. However, the state is becoming more racially and ethnically diverse over time. This diversity brings new health challenges in terms of access to care, unmet health needs and the need to provide culturally-competent care.

In 2009, females in Maine were 96.2% White, 1.0% Black, 0.6% American Indian and Alaska Native, 1.1% Asian, and 1.1% were more than one race; 1.4% of the population was Hispanic.[3] The total percentage of White females in Maine fell slightly from 97.3% in 2000 to 96.2% in 2009, a 1.1% decrease. During this same period, all other racial and ethnic groups increased substantially. For example, the percentage of Black females increased from 0.45% in 2000 to 0.99% in 2009, a 117% increase. Similarly, the population of American Indian females increased 8.9%, Asian females increased 31.6%, and Hispanics increased 89.6% (Figure 1.3).[1]

Figure 1.3.



Source: US Census Bureau[1]

There are five federally recognized Indian tribes in Maine today: Aroostook Band of Micmacs, Houlton Band of Maliseet Indians, Passamaquoddy Tribe of Indian Township, Passamaquoddy Tribe at Pleasant Point, and Penobscot Indian Nation.[8] The majority of Maine's native American population resides in or near the five small, rural communities of Indian Island (Penobscot Nation), Pleasant Point (Passamaquoddy Tribe), Indian Township (Passamaquoddy Tribe), Houlton (Houlton Band of Maliseet) and Presque Isle (Aroostook Band of Micmac).[9]

In 2009, the American Community Survey estimated that 8,067 Mainers identified as American Indian/Alaskan Native alone and 14,811 identified as American Indian/Alaskan Native alone or in combination with one or more other race. Of these, 51.5% were female.[10] A total of 3,369 Passamaquoddy tribal members are listed on the tribal census rolls with 1,364 on the Indian Township census and 2,005 listed on Pleasant Point census. The Aroostook Band of Micmacs is estimated at 1,000 members. The Houlton Band of Maliseet Indians is comprised of approximately 800 members. The Penobscot Nation population is estimated at 2,365 members.[11-14]

The increase in racial and ethnic diversity is recent years is driven in part by the successful resettlement of refugees in Maine. In fiscal year 2010, Catholic Charities of Maine Refugee and Immigrant Services (RIS) resettled approximately 229 primary refugees, 246 secondary migrants and assisted 27 asylees in Maine. Both males and females were equally served in resettlement: 49% of the clients were male and 51% were female. Catholic Charities resettled these men and women primarily in the Portland and Lewiston areas. RIS is projected to resettle approximately 275 primary refugees in FY2011.[15, 16] A primary refugee is one who arrives directly from a refugee camp outside of the U.S. to Maine. A secondary migrant entered the U.S. as a refugee, settled in one state, but then chose to move to Maine. Refugee women arriving in Maine may bring with them complex maternal and reproductive health histories which often includes exposure to sexual and gender-based violence.[17]

Women's Marital and Household Status in Maine

Whether as a result of choosing not to marry, choosing to get divorced, or being widowed, many Maine women are living alone today. Women who live alone have the lowest median income of any type of household, including men who live alone.[18] Women living in poverty are less likely than their higher-income counterparts to have health insurance and use preventive services, and more likely to have health care access problems, suffer from chronic illnesses, and report lower overall health scores.[19] Many single women are raising children on their own and are more likely to be living in poverty. Poverty rates for unmarried female householders with children have consistently been two or three times higher than overall male and female poverty rates in the U.S. since 1966.[18] In 2009, 28% of working women in the U.S. who were unmarried with children had incomes below the poverty level, compared to 8% among all female workers and 6% among male workers.[18]

Women who are heads of households include: single mothers, single women with a parent or other close relative living in their home, and women with other household compositions. Nationally, more households are headed by a single woman (14%) than single men (6%).[18] Similarly, in Maine 15% of households are headed by single women and 6% are headed by single men.[10] Of Maine's households, 0.8% are same sex households.[10] Of same-sex households in 2006, more were composed of females (56%) than males (44%).[20]

In the U.S. and in Maine, more women are widowed and divorced than men.[10, 18] In 2005-2009, slightly more Maine men older than 15 years were married than women (54.7% vs. 50.7%; Table 1.1).[10] During the same time period, 10.3% of women older than 15 in Maine were widowed; this was almost four times more than the percentage of widowed men (2.8%).[10] Among women over

age 65 years, only 41.9% were married compared to 71.9% of men. This is likely because women's life expectancy is longer than men's.

Table 1.1. Marital status of adults by age and sex, Maine, 2005-2009

Age	Married		Widowed		Divorced		Separated		Never married	
Total 15+	52.6%		6.7%		12.6%		1.2%		26.9%	
	Male	**Female**	**Male**	**Female**	**Male**	**Female**	**Male**	**Female**	**Male**	**Female**
All Ages 15+	**54.7%**	**50.7%**	**2.8%**	**10.3%**	**11.4%**	**13.7%**	**1.0%**	**1.3%**	**30.1%**	**23.9%**
15 to 19	0.8%	1.1%	0.2%	0.1%	0.1%	0.1%	0.0%	0.1%	99.0%	98.6%
20 to 34	31.7%	39.7%	0.1%	0.3%	4.6%	7.3%	0.8%	1.2%	62.7%	51.4%
35 to 44	63.5%	64.8%	0.2%	1.0%	14.7%	18.1%	1.6%	2.5%	20.1%	13.6%
45 to 54	67.5%	66.8%	0.9%	2.8%	18.7%	20.2%	1.3%	2.0%	11.5%	8.3%
55 to 64	73.4%	66.1%	2.0%	7.3%	16.4%	19.5%	1.1%	1.2%	7.0%	6.0%
65+	71.9%	41.9%	13.7%	42.3%	9.4%	11.0%	0.6%	0.5%	4.4%	4.4%

Source: American Community Survey[10]

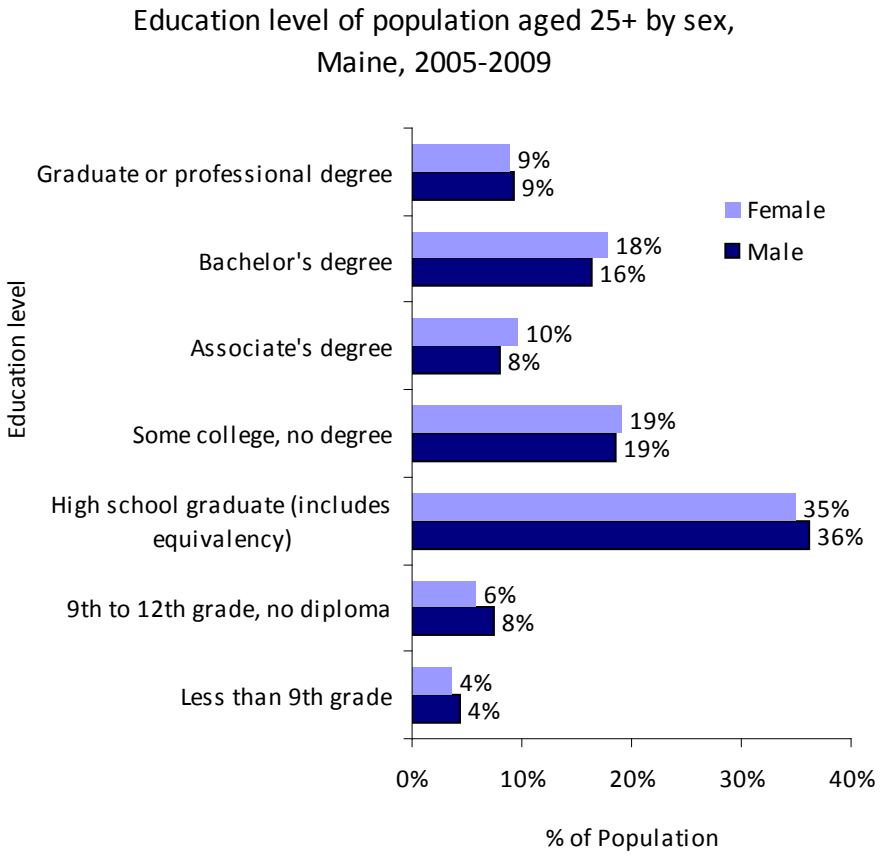
Socio-Economic Status

Education

Several studies have documented a relationship between higher education and better health.[21, 22] Individuals with more years of education have a longer life expectancy, are less likely to be diagnosed with an acute or chronic disease, and are less likely to report anxiety or depression.[21] Nationally and in Maine, younger women are more likely than younger men to have a college or a master's degree.[23] Education enhances women's ability to make positive choices about their health and reproduction, but in order to pursue higher education and career opportunities, more women are getting married and having their first child at older ages.[18] This demographic shift may have implications for women's health in terms of higher-risk pregnancies, riskier operative deliveries and possibly even longer term health risks such as hypertension, diabetes, and congestive heart failure.[24]

More than half of women in Maine over the age of 25 have at least some college education (Figure 1.4).[10, 23] However, close to ten percent (9.6%) of all Maine women have not obtained a high school diploma. The number of Maine women older than age 25 without a high school diploma has not changed in the past five years.[10, 23]

Figure 1.4.



Source: American Community Survey[10]

Employment Status and Labor Force Participation

In the ten years since the last profile of women's health in Maine was published, the nation's economy has experienced significant shifts, including multiple recessions, growing unemployment and increasing poverty. During the past four national recessions, men experienced large increases in unemployment, which was attributed to their dominance in cyclically sensitive occupations, such as manufacturing production and construction. Women are traditionally more concentrated in less cyclically sensitive and more rapidly growing occupations, such as health care, which has kept their unemployment rates lower than those of men.[18]

During the most recent recession, the national unemployment rate among women (age 20 and older) rose from 4.4% to 7.7%; by comparison, the rate for men (age 20 and older) more than doubled, from 4.4% to 9.9%.[18] In 2009, the Maine unemployment rate for women aged 20-64 was 4.9%; for men it was 7.9%.[10]

After decreasing between 2004 and 2007, women's participation rate in the labor force in Maine did not change significantly between 2008 and 2009.[25] Younger women aged 16-24 outnumbered their male counterparts in Maine's labor force in both 2008 and 2009. In all other age groups, there were more men than women working in Maine (Table 1.2).

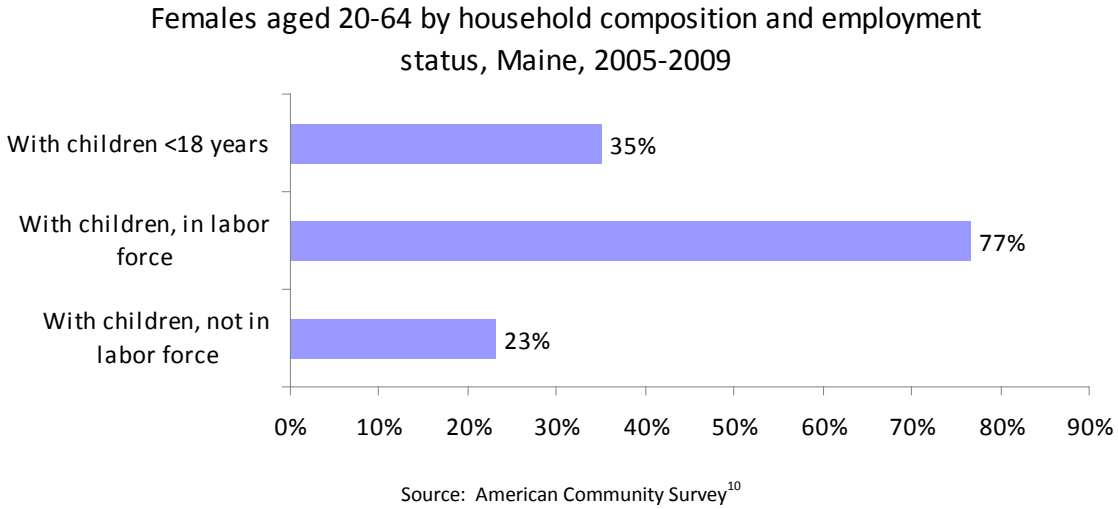
Table 1.2. Labor force participation by age and sex, U.S. and Maine, 2008-2009.

		2008		2009	
Age	**Sex**	**Maine**	**US**	**Maine**	**US**
16-24	Female	65.4%	60.4%	66.9%	58.7%
	Male	63.0%	61.5%	64.6%	59.2%
24-54	Female	80.5%	77.0%	79.9%	77.1%
	Male	87.9%	88.5%	87.9%	87.9%
55+	Female	34.7%	32.8%	33.7%	33.2%
	Male	45.1%	45.2%	44.8%	45.2%

Source: US Census Bureau[25]

According to data from the 2005-2009 American Community Surveys, 35% of Maine women aged 20-64 years had children less than 18 years of age at home. More than three-quarters (76.8%) of these women reported that they were currently working (Figure 1.5).[10]

Figure 1.5.



Source: American Community Survey[10]

Working mothers often pay a financial price for being the primary coordinators of health care for their children. In the Kaiser Family Foundation's nationally-representative telephone survey of 2,015 women aged 18 to 64, almost half (48%) of working mothers report having to take unpaid time off when their children are sick. Lower-income women are even less likely to have workplace benefits such as paid sick leave (45%) and disability insurance (42%), an important financial protection in the event of an injury that prevents a worker from being able to work.[2]

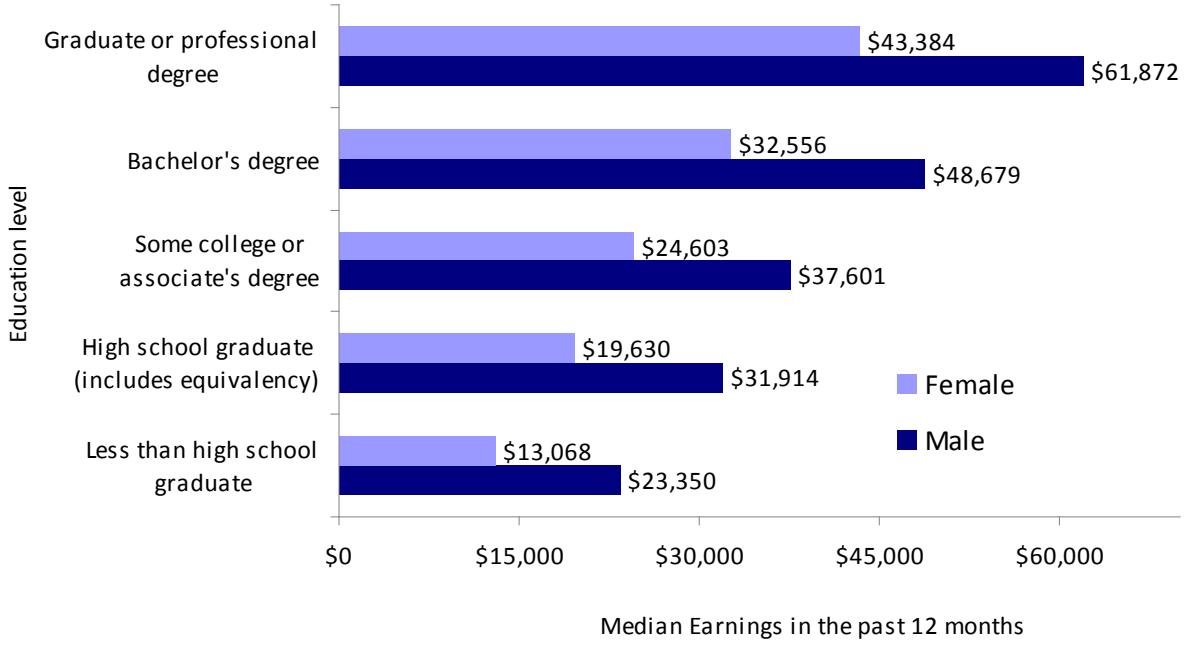
Income and the "Wage Gap"

A woman's level of education is linked to both her ability to find a higher-paying job and to her level of health.[18] In uncertain economic times, many women turn to education as a way to increase their likelihood of finding employment and financial stability. While educational gains can help many women earn more, increased education and labor force participation have not eliminated wage inequities for women nationally or in Maine. In 2009, the median income for all ages and occupations was $32,314 for females and $42,156 for males—a ratio of .77.[10]

At all levels of education, U.S. women earned about 75% of what their male counterparts earned in 2009.[18] Maine has a similar gap, with the largest earning differences observed between men and women with graduate degrees, a difference of $18,848 in annual median earnings (Figure 1.6).

Figure 1.6.

Median annual earnings by sex and level of education, Maine, 2005-2009



Source: American Community Survey[10]

Wage gaps can add up to tens or hundreds of thousands of dollars over a woman's lifetime and may result in increased rates of poverty in old age.[23] The wage gap between men and women can be partially explained by a range of factors, however, in one study of recent college graduates, after accounting for differences in college major, occupation, industry, sector, hours worked, workplace flexibility, experience, educational attainment, enrollment status, GPA, institution selectivity, age, race/ethnicity, region, marital status, and number of children, males still made 5% more than females. Another similar study of full-time workers 10 years after college graduation found that a 12% difference in earnings could not be fully explained.[26] Similar analyses have been done in Maine showing significant gaps between male and female wages even after accounting for work sector and age.[23]

Poverty

In 2009 the percentage living in poverty in Maine was higher among women compared to males (13.9% vs. 10.7%).[10] National rates are somewhat higher; 15.6% of females and 13.1% of males lived in poverty in 2009.[10]

According to the 2005-2009 American Community Surveys, among all age groups, women were more likely to be living in poverty compared to men (Table 1.3). Among women of reproductive age (18-44 years), 17.5% were living in poverty compared to 11.5% of men. Among Mainers over age 65, 12.2% of women lived below the poverty level, compared to 6.7% of men.[10] This is similar to the U.S. In 2009, almost 11% of U.S. women age 65 lived below the poverty level, compared to 7% of U.S. men age 65 and older.[18]

Table 1.3. Poverty level by age and sex, Maine, 2005-2009.

	Below Poverty		
Total	11.4%	13.3%	9.4%
Age	**Maine**	**Females**	**Males**
<18	17.1%	17.9%	16.4%
18-24	23.2%	28.4%	18.2%
25-34	13.7%	16.7%	10.6%
35-44	10.4%	12.3%	8.4%
45-54	8.6%	8.8%	8.4%
55-64	8.8%	9.8%	7.7%
65-74	8.1%	9.5%	6.5%
75+	11.7%	14.9%	6.9%

Source: American Community Survey[10]

Women with children are at especially high risk of living in poverty. In Maine, between 2005 and 2009, an estimated 8.6% of families lived in poverty. Among female-headed single parent families with children, 39.3% were living in poverty compared to 20.6% of families with a single male head of household with children, and 5.5% of married couples with children (Table 1.4).

Table 1.4. Percent living below poverty level by family type, Maine, 2005-2009

Family Type	**% living below poverty level**
Total families	8.6
Single parent families with female head of household with children	39.3
Single parent families with female head of household women without children	9.3
Single parent families with male head of household with children	20.6
Single parent families with male head of household men without children	5.8
Married couple (with or without children)	3.8
Married couple with children	5.5
Married couple without children	2.8

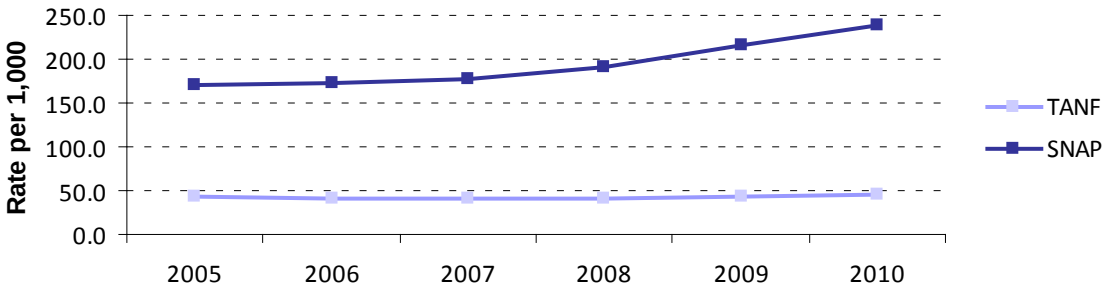
Source: American Community Survey[10]

Fortunately, there are programs in Maine designed to help women during times of economic hardship. Maine Temporary Assistance for Needy Families (TANF) is a program that provides financial assistance when a family is temporarily unable to support themselves. In order to qualify for this benefit program, an individual must be either pregnant or responsible for a child under 19 years of age, have low or very low income, and be either under-employed (working for very low wages), unemployed or about to become unemployed.[27] In 2010, there were 17,394 women over the age of 18 receiving TANF; 99% of these women were between the ages of 18-59 years and 93.5% had children. Nearly all women receiving TANF also receive assistance for food from Maine's Supplemental Nutrition Assistance Program (SNAP). In 2010, SNAP assisted 107,191 women over the age of 18; 84.5% of these women were between 18-59 years and 52.3% had children.[28]

Women's enrollment rates in SNAP over the past six years have not changed significantly, but enrollment in TANF has increased steadily since 2005 (Figure 1.7).

Figure 1.7.

Rate per 1,000 women aged 18-59 enrolled in TANF or SNAP, Maine, 2000-2009



Source: Maine DHHS Office of Integrated Access and Support[28]

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Chapter 2: Reproductive Health

Introduction

A woman's reproductive health status is associated with the long-term social, economic, physical and mental well-being of herself and her children. Improving maternal and newborn health reduces unintended pregnancies and abortion rates, saves women's lives, decreases infant mortality rates, improves child health outcomes and women's status in society, as well as reduces and protects against sexually transmitted infections (STI's).[1]

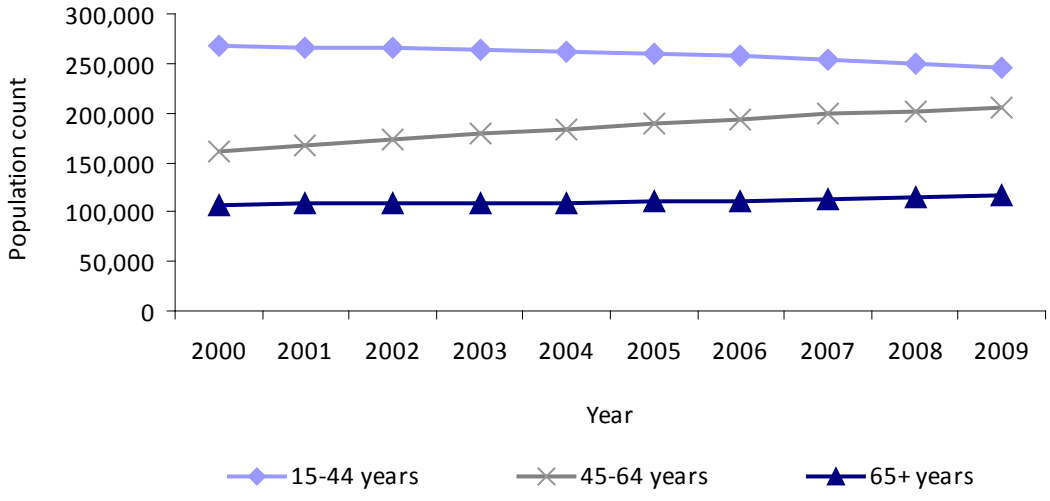
This chapter focuses on women's reproductive health before, during and after pregnancy.

Demographics of Women of Reproductive Age

In 2009, the U.S. Census Bureau estimated that there were 245,825 women of reproductive age (15-44 years-old) living in Maine.[2] This age group comprises 36.4% of the population of women in Maine. The number of women in this age group is declining over time. Between 2000 and 2009, the population of women of reproductive age living in Maine decreased 8.1% (Figure 2.1). In the U.S., there was a 0.5% decline in number of women of reproductive age during this same time period.[2]

Figure 2.1.

Population count of females by age, Maine, 2000-2009



Source: US Census Bureau Estimates[2]

Race and Ethnicity

Although Maine's population is predominately White, other races make up a larger proportion of Maine's younger reproductive age female population compared to Maine's older female population. In 2009, 95.7% of Maine's women of reproductive age were White. Black and Asian women made up 1.2% and 1.3% of the population respectively, followed by those of two or more races (1.1%) and American Indians (0.8%); 1.7% of women of reproductive age were Hispanic. In comparison, 98.7% of Maine's population aged 65 years and older were White, while 0.2% were Black, and 0.4% were Asian (Table 2.1).[2]

Table 2.1. Percent of females aged 15+ years by age, race and ethnicity, Maine, 2009

Age Group	White	Black	American Indian and Alaskan Native	Asian	Native Hawaiian and Other PI	Two or more races	Non-Hispanic	Hispanic
15-44	95.7%	1.2%	0.8%	1.3%	0.04%	1.1%	98.3%	1.7%
45-64	97.7%	0.4%	0.5%	0.8%	0.03%	0.6%	99.3%	0.7%
65+	98.7%	0.2%	0.3%	0.4%	0.02%	0.4%	99.5%	0.5%
Total 15+	97.0%	0.7%	0.6%	0.9%	0.03%	0.8%	98.9%	1.1%

Source: US Census Bureau Estimates[2]

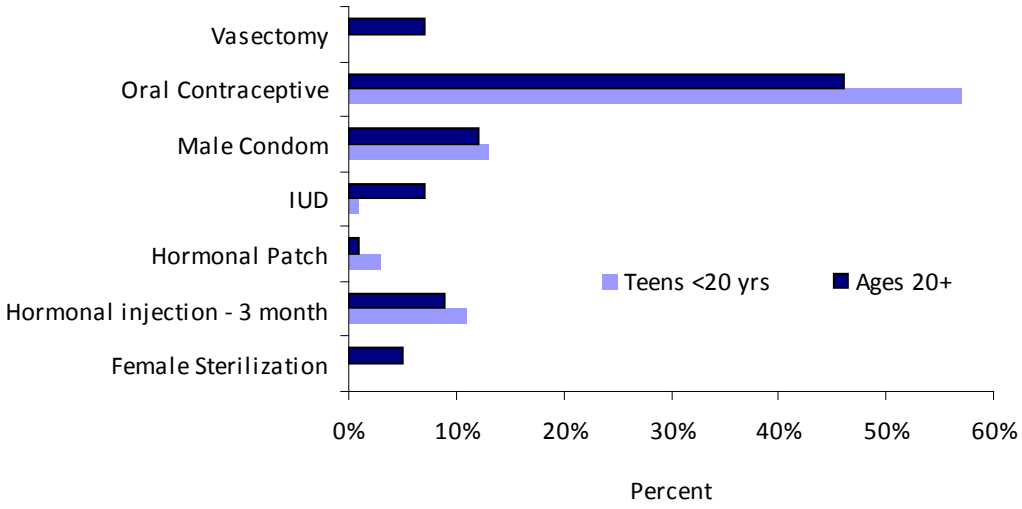
Contraception Use

The most recent self-reported data on women's use of contraception are from Maine's 2004 Behavioral Risk Factor Surveillance System (BRFSS) survey.[3] According to this source, 74% of Maine women between 18 and 44 years of age were trying to prevent becoming pregnant. The primary birth control methods reported by women were surgical procedures (45.4%), birth control drugs (34.1%), and condoms (13.8%). Among women not currently pregnant and not using birth control, 34.8% indicated they wanted to become pregnant or did not care if they became pregnant.[3] According to Maine's 2008 Pregnancy Risk Assessment Monitoring System (PRAMS), a survey of new mothers in Maine, of those women who did not want to get pregnant at the time of conception, 54.8% were not using any contraception.[4]

Based on data from Maine's Family Planning Association, about 50% of women who received services at a family planning clinic during FY10 relied on oral contraception as their primary method of birth control (Figure 2.2);[5] 12% used condoms and 9% relied on hormone injections. These three methods were the most common ones used by teens as well as women over age 20. Women over age 20 were also more likely to rely on methods such as a vaginal ring (7%) and IUD (7%). Women over 45 years of age were more likely than other age groups to report relying on surgical procedures (25%).[5]

Figure 2.2.

Primary method of contraception used by female family planning clients by age and method, Maine, FY2009



Source: Family Planning Association of Maine[5]

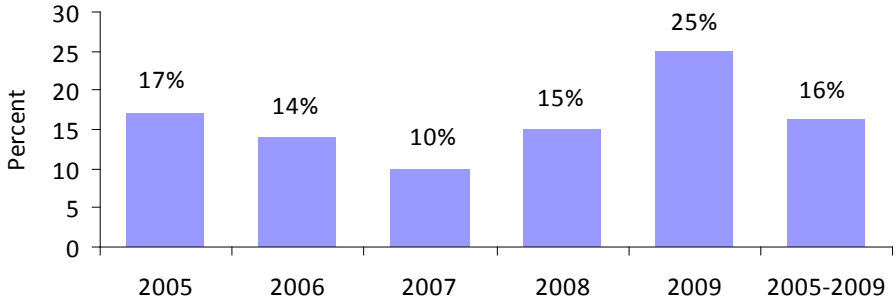
Sexually Transmitted Infections (STI)

HIV/AIDS

In 2009, there were 57 new cases of HIV diagnosed in Maine; 14 of these cases (24.6%) were among females. Since 2000, there has been an average of 50 new cases of HIV diagnosed each year. The proportion of females cases of HIV diagnosed each year has not changed significantly over time (Figure 2.3). Between 2005 and 2009, approximately 16% of diagnosed HIV cases were among women.[6]

Figure 2.3.

Proportion of females diagnosed with HIV (of new HIV diagnoses), Maine, 2005-2009



Source: Maine CDC HIV/STD/Viral Hepatitis Program[6]

As a result of successful treatment options and care, the number of people living with HIV/AIDS has increased, while the numbers of new cases and deaths has remained stable. As of December 2009, there were approximately 1,488 people living with HIV/AIDS in Maine; 16.3% (n=242) were women. Among women, most of those living with HIV/AIDS were between the ages of 25-39 years; the age distribution for men was similar, but there were more men than women living with HIV/AIDS (Table 2.2).[6]

Table 2.2. Number and rate of persons living with HIV/AIDS by age, Maine, 2009

	Females			Males		
Age Group	**Count**	**Population**	**Rate per 100,000**	**Count**	**Population**	**Rate per 100,000**
<15	5	107352	4.7	9	112080	8.0
15-19	9	42947	21.0	16	45534	35.1
20-24	29	39403	73.6	94	42213	222.7
25-29	40	38138	104.9	163	38999	418.0
30-39	78	78197	99.7	468	75206	622.3
40-54	68	158507	42.9	424	150589	281.6
>54	13	210177	6.2	72	178959	40.2
Total	242	674721	35.9	1246	643580	193.6

Source: Maine CDC HIV/STD/Viral Hepatitis Program[6]

Heterosexual contact was the most common mode of transmission for women who were newly diagnosed with HIV between 2005-2009 (82.1%; Table 2.3). Transmission by injection drug use made up 17.9% of cases over the five year period.[6]

Table 2.3. Methods of HIV transmission among females, Maine, 2005-2009

Method of HIV transmission	**Count**	**% of total**
Heterosexual, no HIV risk factor reported	26	46.4%
Heterosexual contact with at-risk partner	20	35.7%
Injection drug use	10	17.9%
Total	56	100.0%

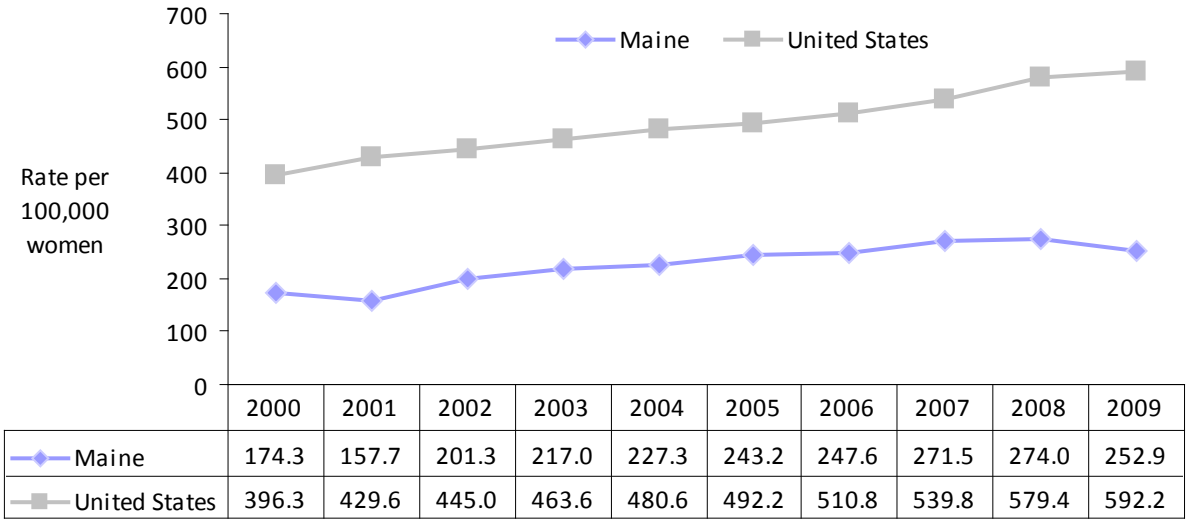
Source: Maine CDC HIV/STD/Viral Hepatitis Program[6]

Chlamydia

Of the reported sexually transmitted infections (STI), chlamydia is the most frequently reported in Maine and the U.S., and the number of reported cases has increased in recent years. Between 1996 and 2009, the number of chlamydia cases in Maine increased from 965 to 2,443.[6, 7] Rates of chlamydia have also increased in the U.S. over the past ten years (Figure 2.4). Since chlamydia cases are only detected if an individual chooses to be tested for the disease, it is unclear whether these increases represent increased testing for the condition or an actual increase in the prevalence of the disease. In 2009, the number of reported cases in Maine declined for the first time since 2001 (Figure 2.4).

Figure 2.4.

Chlamydia rates among females, Maine and the U.S., 2000-2009



	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
Maine	174.3	157.7	201.3	217.0	227.3	243.2	247.6	271.5	274.0	252.9
United States	396.3	429.6	445.0	463.6	480.6	492.2	510.8	539.8	579.4	592.2

Source: Maine CDC HIV/STD/Viral Hepatitis Program[6]

More than 70% of chlamydia diagnoses are among females. However, females are more likely than men to be symptomatic and to be tested for the disease, so the prevalence among men may be higher than the data suggest.[7]

Youth are disproportionately diagnosed with chlamydia. Three out of four cases diagnosed in 2009 were diagnosed among those under age 25. Among females, 34% of cases were diagnosed among those aged 15-19 years and 42% were among those aged 20-24 years (Table 2.4).[6]

Table 2.4. Counts and rate (per 100,000) of chlamydia by age and sex, Maine, 2009

	Females		Males	
Age group	**Count**	**Rate/100,000**	**Count**	**Rate/100,000**
<15	12	11.2	1	0.9
15-19	582	13.6	152	333.8
20-24	716	1817.1	309	732.0
25-29	257	673.9	135	346.2
30-39	112	143.2	89	118.3
40-54	30	18.9	33	21.9
>54	3	1.4	4	2.2
Age Unknown	1		7	
Total	1713	253.9	730	113.4

Source: Maine CDC HIV/STD/Viral Hepatitis Program[6]

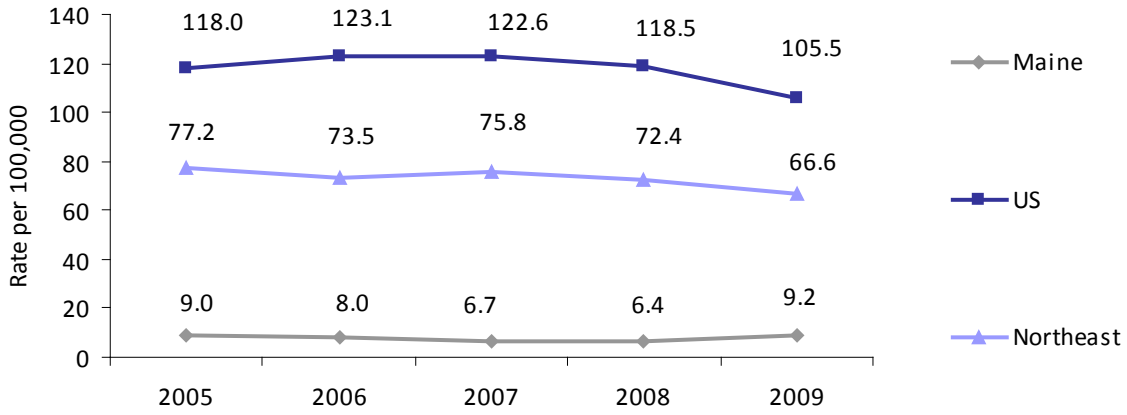
Gonorrhea

In 2009, there were 143 new cases of gonorrhea diagnosed in Maine; 43% of the cases were among females. Between 2005 and 2009 there were, on average, 53 cases diagnosed among females annually.[6]

Rates of gonorrhea among females in Maine have remained relatively stable over the past five years and are lower than rates in the U.S. and the Northeast (Figure 2.5).[6]

Figure 2.5.

Reported cases of gonorrhea among females, Maine, U.S. and the Northeast, 2005-2009



Source: Maine CDC HIV/STD/Viral Hepatitis Program[6]

Pregnancy Rates

Data on live births come from birth certificate data collected as part of Maine's vital statistics system. However, not all pregnancies result in a live birth. A pregnancy may result in a live birth, a fetal loss, or an induced abortion. These outcomes are influenced by health status, access to services, and other individual and community level factors.[8]

The components of Maine's pregnancy count are live births, reported fetal deaths of 20 weeks gestation or more, and reported induced abortions occurring in the state. According to Maine vital statistics data, there were 15,849 known pregnancies among Maine residents in 2009; the pregnancy rate among women aged 15-44 was 64.5 per 1,000 (Table 2.5).[9] Between 2006 and 2009 there were an average of 21,885 pregnancies each year; 84.0% of pregnancies ended in live births, 15.3% ended in induced abortions, and 0.4% ended in fetal deaths (gestation >20 weeks).[9] Because Maine's pregnancy count excludes fetal losses occurring prior to 20 weeks gestation, the reported count is an undercount of the true number of pregnancies.

Chapter 2: Reproductive Health

Maine's pregnancy, birth and abortion rates declined between the mid 1980's to the late 1990's. Since 2002, live birth rates and abortion rates have increased slightly. Fetal death rates have not changed significantly over time (Table 2.5).[9]

Table 2.5. Pregnancy outcome rates (per 1,000 female population) among females aged 15-44 years, Maine, 1985-2009

Year	Pregnancy Rate	Live Birth Rate	Induced Abortion Rate	Fetal Death Rate
1985	75.1	61.2	13.6	0.4
1986	72.6	59.8	12.4	0.3
1987	72.5	59.4	12.9	0.3
1988	73.8	60.3	13.2	0.3
1989	75.0	61.1	13.5	0.3
1990	74.5	60.3	13.9	0.3
1991	71.3	58.8	12.2	0.3
1992	67.1	56.6	10.2	0.3
1993	64.7	53.6	10.8	0.2
1994	62.4	51.8	10.4	0.2
1995	60.4	50.3	9.8	0.3
1996	59.7	50.4	9.1	0.2
1997	59.5	50.3	8.9	0.2
1998	59.4	50.7	8.5	0.2
1999	59.3	50.5	8.5	0.2
2000	60.0	50.7	9.1	0.2
2001	60.8	51.6	9.1	0.2
2002	59.5	50.9	8.2	0.3
2003	61.7	52.3	9.2	0.2
2004	62.6	53.0	9.4	0.3
2005	63.8	54.2	9.3	0.3
2006	65.2	55.1	9.9	0.3
2007	66.1	55.7	10.2	0.2
2008	64.8	54.4	10.1	0.2
2009	64.5	54.9	9.5	0.2

Source: Maine Vital Records Data[9]

Age

Between 2006 and 2009, the proportion of Maine pregnancies resulting in a live birth was lowest among 10-19 year olds (45.3% among 10-14 year olds and 71.4% among 15-19 year olds) and highest among 30-34 year old women (90.8%). Induced abortions were most common among the youngest age groups, least common among 30-34 year olds, and slightly more common among older women. Reported fetal deaths were rare and comprised 0.4% of reported pregnancies (Table 2.6).[9]

Table 2.6. Outcomes for reported pregnancies by maternal age, Maine, 2006-2009

	All pregnancies	Live births		Fetal deaths		Induced abortion	
Maternal age	Average # of pregnancies/year	Annual Average #	%	Annual Average #	%	Annual Average #	%
10 – 14	21	10	45.3	0	0.0	12	54.7
15 – 19	2,076	1,483	71.4	9	0.4	584	28.1
20 – 24	5,912	4,702	79.5	23	0.4	1,187	20.1
25 – 29	6,226	5,441	87.4	20	0.3	765	12.3
30 – 34	4,639	4,212	90.8	15	0.3	412	8.9
35 – 39	2,428	2,142	88.2	9	0.4	277	11.4
40 – 44	523	424	81.2	4	0.8	94	18.0
45 – 54	34	29	86.1	0	0.0	5	13.9
Total [a]	21,885	18,445	84.3	82	0.4	3,358	15.3

[a] Includes an average of approximately 10 women per year with unknown age.
Note: Percentages with a small number in the numerator will have substantial random variation over time (a large standard error), caution should be taken when making comparisons with percentages calculated with fewer than 20 events.
Source: Maine Vital Records Data[9]

Public Health District

Between 2006 and 2009, pregnancy rates were lowest among women living in Aroostook, Penquis, and York public health districts and highest among those living in Cumberland and Western districts (Table 2.7).[9]

Table 2.7. Pregnancy rate and outcomes by public health district, Maine, 2006-2009

Public Health District	Number of pregnancies	Number of Births	Number of Abortions	# of Fetal Deaths	Pregnancy rate/ 1,000 females age 15-44 yrs
York	9421	8060	1337	24	61.7
Cumberland	14939	11751	3144	44	69.5
Western Maine	10435	8996	1387	52	68.2
Mid Coast Maine	7111	6063	1030	18	66.9
Central Maine	8377	7137	1218	22	63.4
Penquis	8154	6987	1124	43	60.5
Downeast	3906	3354	524	28	64.6
Aroostook	3067	2862	193	12	60.0
Total*	65654	55334	10074	246	65.3

*includes women with missing data on district of residence
Source: Maine Vital Records Data[9]

Women and Pregnancy

Maternal Mortality

In 2007, the U.S. maternal mortality ratio (number of maternal deaths per 100,000 live births) was 12.7 maternal deaths per 100,000 live births.[10] The U.S. maternal mortality ratio has risen over the past 30 years—in 1982, the U.S. ratio was 7.5 deaths per 100,000 births. In Maine, there have been two maternal deaths in the past 10 years (1999-2008), a ratio of 1.3 maternal deaths[a] per 100,000 live births.[9] Maine has met the HP2010 goal of reducing the maternal mortality rate to no more than 3.3 per 100,000 live births.[11]

Most U.S. maternal deaths are attributed to direct obstetric causes including eclampsia and pre-eclampsia, hemorrhage and placenta previa, obstetrical tetanus, obstetric embolism, and other direct causes. Possible explanations for the national increase in maternal deaths include a rise in the number of c-sections, particularly among women who have undergone several previous c-sections, and the rise in obesity. Race/ethnicity and quality of care may also factor into the maternal mortality rate.[8] There have also been changes in coding and recording of maternal deaths on death certificates starting in 2003, which may have contributed to the apparent rise in the U.S. maternal mortality rate.

Prenatal Care

Prenatal care is the comprehensive care that women receive and provide for themselves throughout their pregnancy. Early and ongoing adequate prenatal care is important to a healthy pregnancy and baby.[11] Inadequate prenatal care, including late initiation of care, infrequent prenatal visits, or no care at all, is associated with poor infant and maternal outcomes.[11]

Of Maine women who gave birth in 2009, more than 1,600 (12%) did not initiate prenatal care in the first trimester of their pregnancy and more than 2,000 (15%) did not receive adequate prenatal care.[9]

Between 1999 and 2009, the average proportion of Maine women giving birth who received early prenatal care (defined as prenatal care initiated in the first trimester) was 87.7%. Since 2003, this figure has remained fairly stable, with estimates ranging from 87.4%-88.1% (Figure 2.6)[9]. Maine is close, but has not yet met the HM2010 and HP2010 goals of early prenatal care for 90% of live births.[11, 12]

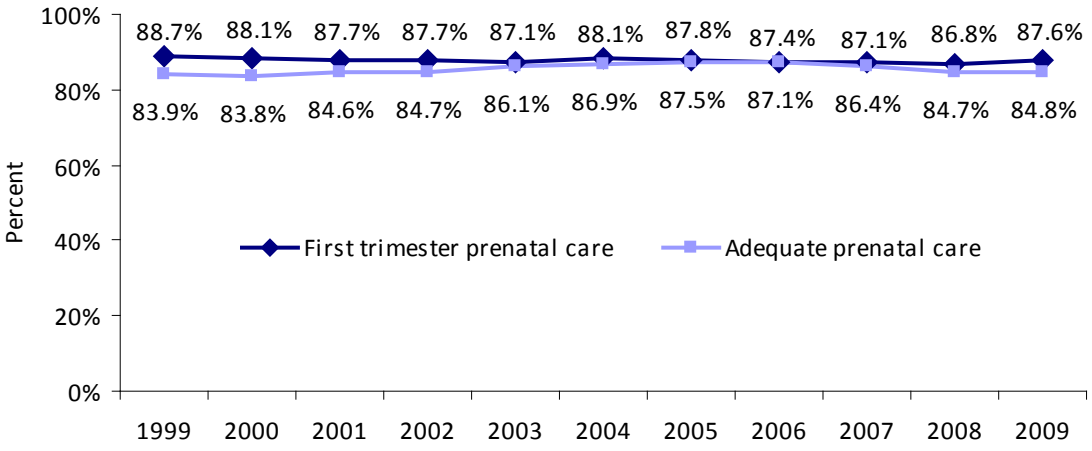
Between 1999 and 2009, the average proportion of Maine women giving birth who received adequate or greater than adequate prenatal care (defined as 80% or higher on the Kotelchuck

[a] The number of maternal deaths does not include all deaths of pregnant women, but only deaths reported on the death certificate that were assigned to causes related to or aggravated by pregnancy or pregnancy management (International Classification of Diseases [ICD]–10 codes A34, O00–O95, and O98–O99). Excluded from this count are deaths that occur more than 42 days after the termination of pregnancy and deaths of pregnant women due to unintentional injuries, homicides, and suicides (Jiaquan, 2010).

Index[b], a standard measure of prenatal care adequacy) was 85.4%. Fewer women receive adequate prenatal care than the proportion of women who initiate prenatal care in the first trimester.[9] Similar to prenatal care, the proportion of women receiving at least adequate prenatal care has not changed significantly over the past ten years (Figure 2.6).

Figure 2.6.

Percent of females receiving prenatal care in the first trimester and the percent receiving adequate* prenatal care, Maine, 1999-2009



Data source: Maine Vital Records Data[9]

Between 2005-2009, women were less likely to receive early prenatal care if they were younger, less educated, or a race other than White (Table 2.8). The proportion of adolescent mothers who received prenatal care in the first trimester was 78.3%. In comparison, the proportion of women in older age groups who received early prenatal care was 84% and greater.[9]

Compared to White women, Black, American Indian, and Asian/PI women were less likely to receive prenatal care in the 1st trimester (Table 2.8).[9]

The proportion of women without a high school diploma who received prenatal care in the first trimester was 76.4%, compared to 85.5% of women with a high school diploma and 91.4% of women with post-secondary education (Table 2.8).[9]

[b], * Adequate prenatal care was measured by the Kotelchuck Index, a measure of prenatal care adequacy that captures initiation of prenatal care and the number of visits received.

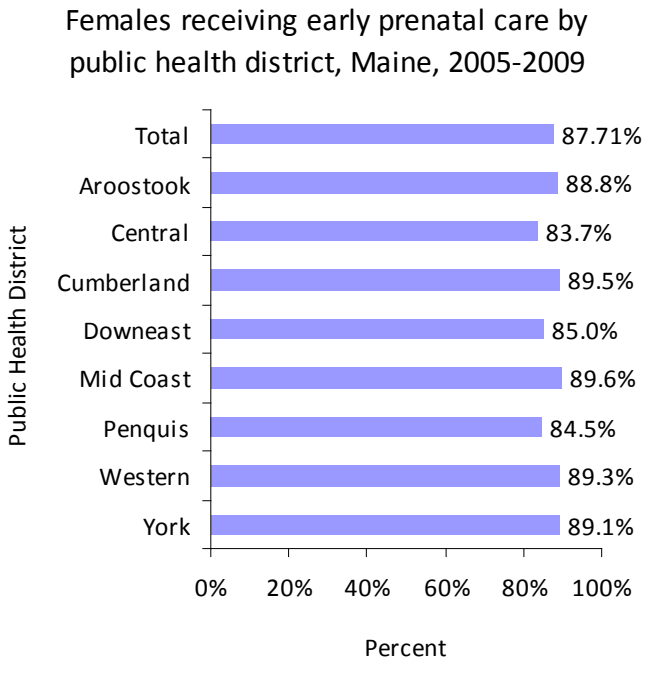
Table 2.8. Early prenatal care by age, race, ethnicity, and education, Maine, 2005-2009

Demographic Group	% Prenatal care in 1st trimester	95% CI
Age		
< 20	78.3	(77.2, 79.4)
20 – 24	84.9	(84.4, 85.4)
25 – 34	89.9	(89.6, 90.2)
35 +	89.6	(89.1, 90.3)
Race		
White	88.1	(87.9, 88.3)
Black	77.3	(75.3, 79.3)
American Indian	81.3	(78.1, 84.5)
Asian	84.0	(81.9, 86.1)
Other	84.8	(76.4, 91.0)
Ethnicity		
Hispanic	81.9	(79.6, 84.3)
Non-Hispanic	87.8	(87.5, 88.0)
Education		
< High school	76.4	(75.4, 77.4)
High school graduate	85.5	(85.0, 85.9)
> High school	91.4	(91.1, 91.7)

Source: Maine Vital Records Data[9]

Based on data from 2005-2009, there was geographic variation in prenatal care initiation among women accross Maine's public health districts (Figure 2.7). Women in the Downeast, Central, and Penquis districts were less likely to receive early prenatal care than women in other districts.[9]

Figure 2.7.



Source: Maine Vital Records Data[9]

Pregnancy-related Health Behaviors

Pre-pregnancy Body Mass Index

Pre-pregnancy weight determines the amount of weight women should gain during pregnancy. Women who are obese prior to pregnancy are at greater risk for delivering an infant with an excessive birth weight and are more likely to develop gestational diabetes.[13]

According to Maine 2009 PRAMS data, more than one in four (26.8%) new mothers were classified as obese before their most recent pregnancy, 13.5% were classified as overweight, and 9.6% of women were classified as underweight.[c] Among the 29 PRAMS reporting areas/states in 2008, Maine had the third highest rates of pre-pregnancy obesity.[14]

The prevalence of pre-pregnancy obesity was highest among women aged 20-35 years. Education and marital status were not associated with pre-pregnancy weight, but women with household incomes >$50,000 were less likely than women with household incomes <$50,000 to be overweight or obese prior to pregnancy (Table 2.9).[14]

Table 2.9. Pre-pregnancy weight status among new mothers by demographics, Maine, 2009

Demographic Group	Underweight		Normal		Overweight		Obese	
	%	95% CI	%	95% CI	%	95% CI	%	95% CI
Total	9.6	(7.72 - 11.82)	50.1	(46.60 - 53.59)	13.5	(11.26 - 19.12)	26.8	(23.83-30.06)
Age								
<20	11.5	(5.41 - 22.69)	53.4	(40.39 - 65.92)	16.1	(8.55 - 28.2)	19.1	(10.74 - 31.58)
20-24	12.5	(8.41 - 18.27)	51.5	(44.15 - 58.69)	7.9	(4.72 - 12.86)	28.1	(22.01 - 35.21)
25-34	8.2	(6.00 - 10.99)	47.7	(43.12 - 52.35)	16.2	(13.01 - 19.99)	27.9	(23.96 - 32.28)
35+	9.0	(4.88 - 16.01)	56.4	(46.68 - 65.64)	10.5	(5.88 - 18.11)	24.1	(0.00 - 33.42)
Education								
< High School	19.7	(11.35-31.85)	39.9	(28.12 - 52.88)	8.3	(3.36 - 18.97)	32.2	(21.30 - 45.5)
High School	9.1	(6.15 - 13.19)	46.1	(40.10 - 52.2)	17.2	(13.05 - 22.38)	27.6	(22.49 - 33.41)
> High School	8.4	(6.27 - 11.18)	54.4	(49.87 - 58.76)	11.8	(9.15 - 14.96)	25.5	(21.80 - 29.59)
Marital Status								
Married	7.8	(5.74 - 10.51)	54.6	(47.05 - 56.05)	13.5	(10.69 - 16.96)	27.1	(23.29 - 31.33)
Not Married	12.0	(8.86 - 16.07)	48.1	(42.60 - 53.61)	13.5	(10.08 - 17.81)	26.4	(21.81 - 31.63)
Income								
<$15,000	12.0	(8.12 - 17.27)	44.7	(37.87 - 51.80)	13.3	(9.10 - 19.03)	30.0	(23.92 - 36.89)
$15,000-24,999	14.8	(8.97 - 23.41)	39.0	(29.97 - 48.78)	15.9	(9.94 - 24.55)	30.3	(22.09 - 40.02)
$25,000-49,999	6.9	(4.03 - 11.65)	45.8	(38.57 - 53.20)	18.5	(13.37 - 25.01)	28.8	(22.55 - 35.95)
$50,000+	7.3	(4.81 - 10.82)	59.7	(53.75 - 65.38)	9.6	(6.63 - 13.70)	23.4	(18.76 - 28.89)

Source: Maine PRAMS[14]

[c] Data from PRAMS allow the calculation of pre-pregnancy body mass index (BMI) based on self-reported height and weight. A BMI of less than 19.8 is classified as underweight, overweight if between 26.0 and 29.0, and obese if greater than 29.0.

Substance Use During Pregnancy

Tobacco

Tobacco use during preconception can cause reduced fertility and conception delay; tobacco use during pregnancy increases the risk for pregnancy complications, and exposure to secondhand smoke after delivery increases an infant's risk for respiratory tract, ear infections, and sudden infant death syndrome (SIDS).[15]

According to 2009 PRAMS data, 37.2% of new mothers in Maine reported smoking in the 3 months prior to getting pregnant, 21.2% reported smoking during the last 3 months of pregnancy, and 26.1% reported continuing, resuming, or beginning smoking after giving birth. Maine women under age 24 were more likely than older women to report having smoked during the last 3 months of their pregnancy (Table 2.10). Smoking during pregnancy was also related to lower educational attainment and income. Married women were less likely than unmarried women to smoke during pregnancy. Women who reported smoking during pregnancy were more likely than non-smokers to have a low birth weight (<2500g) baby (Table 2.10).[14]

Table 2.10. Proportion of females who smoked during the last three months of pregnancy by demographic characteristics, Maine, 2009.

Demographic Groups	Unweighted N	% who smoked	95% CI
Total	1078	21.17	(18.4 - 24.2)
Age			
<20	85	29.69	(19.4 - 42.5)
20-24	240	31.97	(25.5 - 39.2)
25-34	598	18.39	(15.0 - 22.3)
35+	155	7.49	(4.0 - 13.7)
Education			
< High School	87	51.17	(38.6 - 63.6)
High School	372	35.58	(30.1 - 41.5)
> High School	618	6.94	(5.1 - 9.5)
Marital Status			
Married	625	10.26	(7.8- 13.4)
Not Married	453	36.02	(30.9 - 41.4)
Income			
<$15,000	280	44.20	(37.4 - 51.2)
$15,000-24,999	135	33.56	(25.0 - 43.4)
$25,000-49,999	232	12.59	(8.6 - 18.2)
$50,000+	360	1.71	(0.7 - 4.2)
Infant's birth weight			
<2500 grams	388	38.56	(35.3 – 42.0)
2500 grams+	688	20.17	(17.3 - 23.4)

Source: Maine PRAMS[14]

Alcohol

In 2008, 63.8% of Maine new mothers reported they had any alcohol in the three months before becoming pregnant; 6.6% reported alcohol use in the last three months of pregnancy.[4]

Oral Health and Pregnancy

Oral health care during pregnancy is often neglected by patients, and dentists and physicians may be cautious about treating dental problems during pregnancy. However, research suggests that periodontitis, a severe form of gum disease, is associated with infant low-birth weight and preterm birth.[16] Pregnant women are at increased risk for some oral health problems, such as oral lesions, dental caries, oral tumors, loose teeth, and gingivitis.[16] Treatment of dental caries during pregnancy or during the postpartum period can reduce the transmission of bacteria to an infant, decreasing the risk for childhood dental decay.[16]

The 2008 PRAMS survey found that only 39.4% of Maine new mothers had had their teeth cleaned during their most recent pregnancy and 26.8% had had them cleaned after that pregnancy (note: these two groups are not mutually exclusive). Less than half (43.9%) of the women said that a dental or other health care worker had talked with them during their pregnancy about how to care for their teeth and gums.[17]

Intimate Partner Violence During Pregnancy

Violence during pregnancy has consequences for both the mother and fetus including fetal death, infant low birth weight, STIs, maternal substance abuse, and maternal depression.[18] Between 2004 and 2007, about 5% of new mothers in Maine reported experiencing intimate partner abuse (or domestic violence) around the time of pregnancy. New mothers who experienced domestic violence (DV) were more likely to be younger (less than 20 years old), have less than a high school education, and have household incomes less than $10,000 per year. Seventy percent of new mothers in Maine who experienced intimate partner violence around the time of pregnancy were not trying to get pregnant at the time they conceived. Almost 1 in 3 (29.4%) new mothers in Maine who experienced DV around the time of pregnancy were diagnosed with post-partum depression, compared to 12.5% of women who were not DV victims.[19]

Pregnancy-related Medical Conditions

Gestational diabetes and pregnancy-associated hypertension were the two most common maternal medical risk factors recorded on birth certificates in 2009 (Table 2.11). Maine's rate of pre-pregnancy and gestational diabetes was slightly higher than the most recent national rate (5.3 vs. 4.5 per 1,000 live births).[20] According to 2007 PRAMS data, prevalence of gestational diabetes among new mothers in Maine did not vary by insurance status, race, income or education.[19]

About 5% of mothers in Maine develop hypertension during their pregnancy (Table 2.11). The percentage of births with maternal pregnancy-associated hypertension was slightly higher in Maine in 2009 than in the U.S. in 2008 (5.1% vs. 3.9%).[20]

Table 2.11. Maternal medical risks, live births, Maine resident data, 2009

Maternal medical risks	# of births w/maternal medical condition	% of births
Anemia	277	2.1
Acute or chronic lung disease	287	2.1
Diabetes, gestational	638	4.7
Diabetes, pre-existing	87	0.6
Hydramnios/oligohydramnios	296	2.2
Hypertension, pregnancy	688	5.1

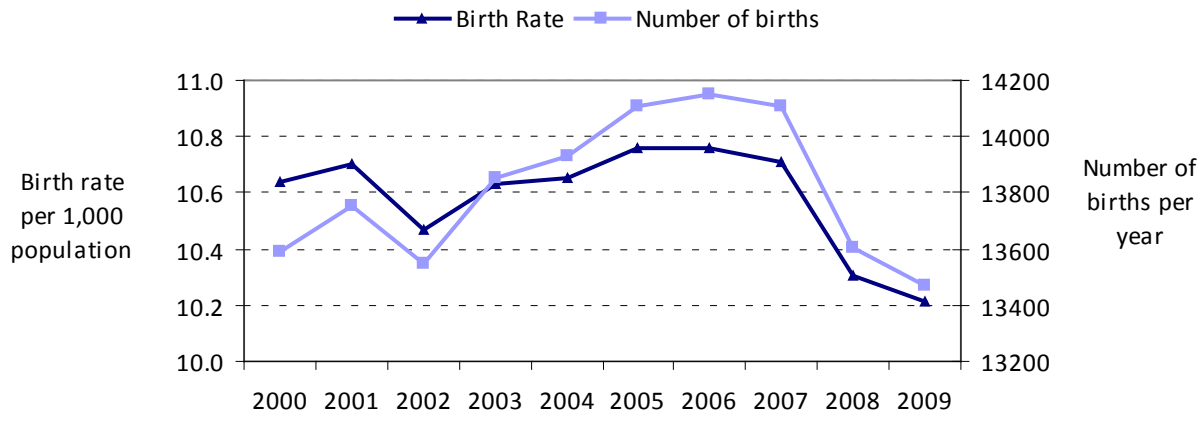
Source: Maine Vital Records Data [9]

Live Births

There were 13,466 live births to Maine residents in 2009. Maine's birth rate and the number of births have decreased in recent years and preliminary data from 2010 suggest that the rate is continuing to decline (Figure 2.8).[9]

Figure 2.8.

Birth rates and number of live births by year, Maine, 2000-2009



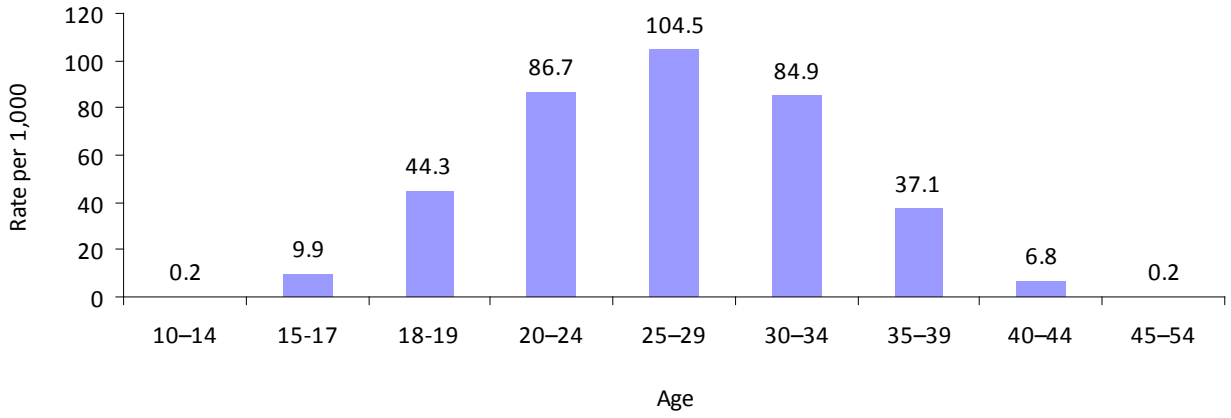
Source: Maine Vital Records Data[9]

Maternal Demographics

In 2009, maternal age at the time of first live birth in Maine ranged from age 13 to 48 years. Most births were among women aged 20-34 years (Figure 2.9).[9] Maine's mean maternal age in 2009 was 25.6 years, which was similar to the national mean (25.1 years) in 2008.[20] Maine's average maternal age at first birth has not changed in the last decade (25.3 years in 1999).[9]

Figure 2.9.

Rate of births to Maine females by maternal age, 2009



Data source: Maine Vital Records Data[9]

In 2009, the largest proportion of Maine births was among women in their twenties (55% of births were among women age 20-29; Table 2.12). Less than 1% of births were to Maine women outside the ages of 15-44 (0.2% of births were to women aged 45 years or more and 0.2% of births were to women younger than 15 years). This distribution is similar to that of the nation as a whole.[9, 20]

Table 2.12. Maternal demographics, Maine (2009) and U.S. (2008)

Demographic Groups	Maine (2009) %	U.S. (2008) %
Age		
<20	8.2	10.4
20 - 29	55.0	53.0
30 – 39	34.4	34.0
40+	2.4	2.6
Education		
<High school	10.8	26.4
High school	33.8	50.3
>High school	55.0	23.3
Marital status - Married	62.9	61.5
Parity		
Without previous live birth	44.6	39.8
With 1 previous live birth	33.6	31.8
With 2+ previous live births	21.8	27.9
Plurality		
Singleton	96.8	96.6
Twins	3.1	3.2
Race		
Hispanic	1.6	24.4
Black	2.4	15.7

Data Source: Maine Vital Records Data;[9] National Center for Health Statistics[20]

More than half of all births in Maine in 2009 were to women with education beyond high school (Table 2.12). This is significantly higher than in the U.S.—only 23.3% of 2008 births in the U.S. were to women with education beyond high school education. In Maine, 1 in 10 births (10.8%) were to women with less than a high school education, compared to 1 in 4 (26.4%) U.S. births. The percent of births to married women in Maine was comparable to the U.S. (Table 2.12).[9, 20]

Slightly less than half (44.6%) of births in Maine in 2009 were first time births; about one third (33.6%) were to women with one previous live birth and 21.8% were to women with two or more previous live births. These, as well as Maine's rate of twin births, were comparable to U.S. women (Table 2.12).[9, 20]

Less than 2% of Maine births were among Hispanic women and 2.4% of births were among Black women (Table 2.12). The proportion of births among Black women in Maine has recently increased, from an average of 113 births per year in 1994-2003 to an average of 367 births per year in 2007-2009 (Table 2.13).[9] This increase is partially attributable to immigration patterns to Maine over the last decade.[21] Of the Black women giving birth in recent years, nearly 50% were of Somali origin and 8% were of Sudanese origin.[9]

Table 2.13. Maternal race and live births, Maine, 1994-2003, 2007-2009

	1994 – 2003		2007 – 2009	
Maternal race	**Average annual births**	**%**	**Average annual births**	**%**
White	13,349	96.9%	12946	94.3%
Black	113	0.8%	367	2.7%
Asian/Pacific Islander	177	1.3%	231	1.7%
American Indian/Native American	103	0.7%	124	0.9%
Other	4	<0.1%	22	0.2%
Unknown	31	0.2%	34	0.3%
Total average annual births	13,777		13725	

Source: Maine Vital Records Data[9]

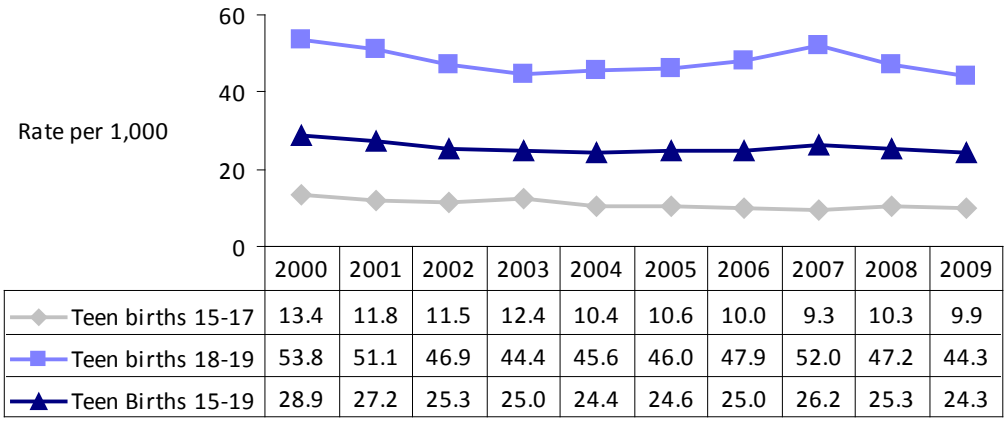
Adolescent Births

The 2009 birth rate among Maine teens aged 15-19 was 24.3 per 1,000 female population, a rate equivalent to approximately 1 birth for every 40 adolescent females. In 2009, there were 1,042 births to teen mothers between the ages of 15 and 19; accounting for 7.7% of Maine births.[9]

The birth rate among Maine adolescents declined consistently throughout the 1990s and the early part of this decade. In Maine, as well as the U.S, the birth rate increased slightly in 2006 and 2007, which was driven by the adolescent birth rate among those aged 18 and 19 years (Figure 2.10). However, since that time, it has resumed its decline (Figure 2.10).[9]

Figure 2.10.

Adolescent birth rates (per 1,000) by age group, Maine, 2000-2009



	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
Teen births 15-17	13.4	11.8	11.5	12.4	10.4	10.6	10.0	9.3	10.3	9.9
Teen births 18-19	53.8	51.1	46.9	44.4	45.6	46.0	47.9	52.0	47.2	44.3
Teen Births 15-19	28.9	27.2	25.3	25.0	24.4	24.6	25.0	26.2	25.3	24.3

Source: Maine Vital Statistics Data[9]

Maine's teen birth rate has been consistently lower than the U.S. rate. Based on the most recent data available, the 2008 birth rate for adolescents aged 15-19 in the U.S. was 41.5 per 1,000;[20] the Maine rate in 2008 was 25.3 per 1,000. Among non-Hispanic Whites, the U.S. adolescent birth rate for 15-19 year olds was 26.7 per 1,000. In 2008, only five states reported lower adolescent birth rates than Maine's.[20]

Unintended Births

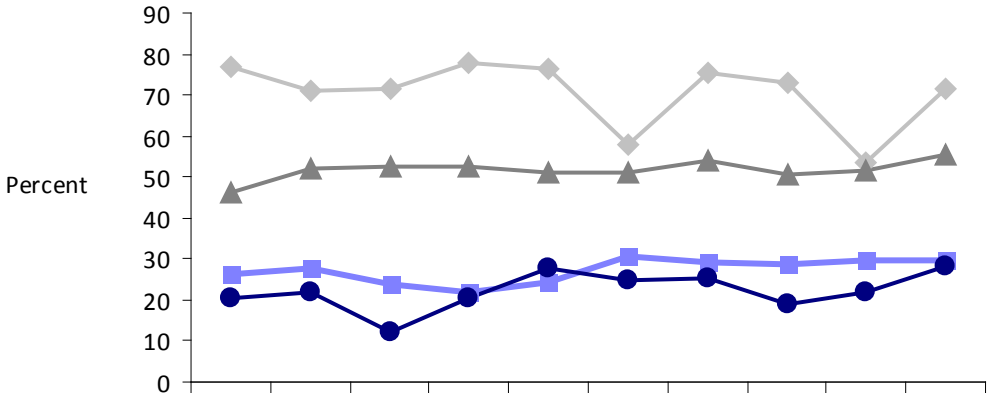
In this report unintended births are defined as the percent of new mothers who reported on PRAMS that they had not wanted to become pregnant at the time they conceived (i.e., they wanted to become pregnant later or not at all). Based on data from 2009 PRAMS, 39% of new mothers in Maine reported that the birth of their most recent child was unintended.[14] This is likely an underestimate of unintended pregnancy because many unwanted pregnancies do not result in a live birth.

The percent of new mothers reporting an unintended birth has increased in recent years in Maine from 33.5% in 2002 to 39.0% in 2009, but this change is not statistically significant.[14]

In 2009, the highest percent of unintended births occurred among youth under the age of 20 years (71.7%); 55.4% of new mothers 20-24 years old, 29.8% of new mothers aged 25-34 years and 28.3% of mothers age 35 and older reported that their birth was unintended (Figure 2.11).[14]

Figure 2.11.

Unintended births by age, Maine, 2000-2009



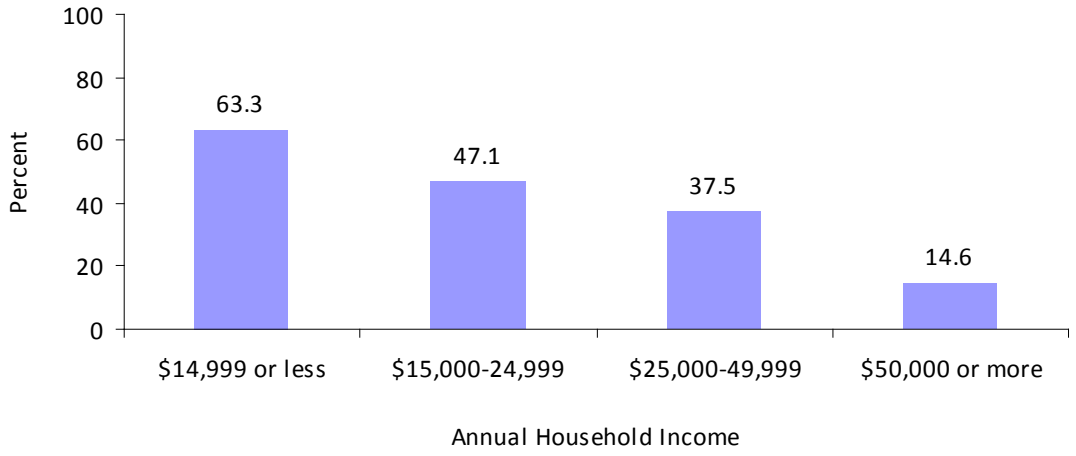
	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
<20 yrs	76.8	71.2	71.4	77.6	76.6	57.9	75.3	73.0	53.3	71.7
20-24 yrs	46.0	52.1	52.4	52.7	51.0	51.3	53.9	50.8	51.6	55.4
25-34 yrs	26.2	27.6	23.6	22.1	24.1	30.7	29.4	28.6	29.6	29.8
35+ yrs	20.3	22.1	12.1	20.3	27.9	24.7	25.4	19.0	21.9	28.3

Source: Maine PRAMS[4]

Based on 2009 PRAMS data, having an unintended birth was related to indicators of socioeconomic status, including income, educational attainment, and health insurance. Approximately 63% of women with household incomes of $14,999 or less reported an unintended birth compared to 47% of women earning $15,000-$24,999, 37% of women with household incomes of $25,000-$49,999, and 14.6% of those with household incomes of $50,000 or more (Figure 2.12).[14] We see the same pattern with and educational attainment. In 2009, 62.3% of women with less than a high school education reported an unintended birth compared to 28.3% of women with more than a high school education. Unmarried women were almost three times more likely to report that their most recent birth was unintended compared to married women (62.9% vs. 21.7%).[14]

Figure 2.12.

Percent unintended births by income level, Maine, 2009



Source: Maine PRAMS[14]

Based on analyses conducted using data from Maine's 2004-2007 PRAMS surveys, women who reported that their birth was unintended were less likely to have health insurance before their pregnancy than women who reported that their birth was intended (46.3% vs. 71.8%). Among women with health insurance, a greater proportion of women with MaineCare had an unintended birth compared to privately insured women (39.2% vs. 20.7%).[22]

Unintended births are related to many factors that could negatively impact the health of women and infants. Between 2004 and 2007, women in Maine who had unintended births were less likely than other women to receive prenatal care in the first trimester (79% vs. 90%) and were less likely to receive at least adequate prenatal care as measured by the Kotelchuck Index (84% vs. 90%). Women who had an unintended birth were more likely to smoke during the last 3 months of their pregnancy (27% vs. 13%) and were 2 times more likely than other women to report experiencing three or more stressful life events prior to the birth of their child (48% vs. 23%). Women who reported an unintended birth were also more likely than other women to report experiencing domestic violence from a current or ex-partner during the 12 months prior to their pregnancy (6.8% vs. 2.6%) and to report abuse during their pregnancy (3.6% vs. 1.2%).

Women who had an unintended birth were also more likely to report a diagnosis of depression after the birth of their child compared to women whose child was intended (19% vs. 11%). Unintended births were not more likely to be premature or to be born at a low birth weight. However, women who had not intended to get pregnant were less likely to report ever having breastfed their baby compared to women with intended births (71% vs. 84%).[22]

Childbirth and the Postpartum Period

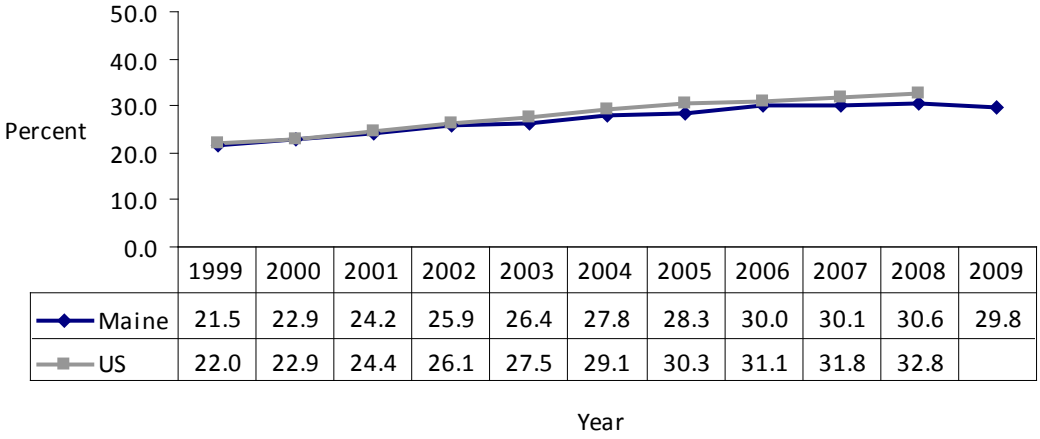
Cesarean Sections

Cesarean sections (C-sections) are becoming more common nationwide and in Maine. However, due to the risks involved in C-section deliveries, such as surgical complications and maternal re-hospitalization, the benefits of cesarean delivery are under debate.[23]

Nearly seven in ten Maine births were delivered vaginally and approximately 30% by C- section [9] Maine's 2009 C-section rate was similar to the U.S. 2008 C-section rate of 32.3.[20] However, rates of Cesarean delivery have increased by more than 40% over the past decade in Maine and the U.S. (Figure 2.13).

Figure 2.13.

Percent of live births delivered by Cesarean section, Maine and U.S., 1999-2009



	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
Maine	21.5	22.9	24.2	25.9	26.4	27.8	28.3	30.0	30.1	30.6	29.8
US	22.0	22.9	24.4	26.1	27.5	29.1	30.3	31.1	31.8	32.8	

Sources: Maine Vital Records Data[9]; Martin, 2010[20]

Breastfeeding

Breastfeeding not only protects infants from illness and reduces an infant's risk of developing health problems such as ear infections, asthma, obesity and diabetes, it may also benefit mothers.[24] Breastfeeding has been linked to decreased risk of developing type 2 diabetes, breast cancer, ovarian cancer, and postpartum depression.[24]

Organizations such as the American Academy of Pediatrics, the American Academy of Family Physicians and the American College of Obstetricians and Gynecologists recommend that infants are breastfed for at least 12 months and exclusively breastfeed for the first six months of life.[25]

About three out of every four (75.2%) children born in Maine in 2007 were ever breastfed. About half (48.2%) of children born in Maine in 2007 were breastfed for at least 6 months and 18.2% were exclusively breastfed for 6 months. These percentages are higher than the national average, but not statistically higher. Maine ranks 19th in the U.S. on the percent of infants who are breastfed for at least six months.[26]

Initiation of breastfeeding is positively associated with maternal age, educational attainment, income and marital status (Table 2.14). Mothers insured under MaineCare are less likely to have breastfed (71%) compared to women who received some form of insurance other than MaineCare (87%). Infant birth weight was not related to whether a new mother initiated breastfeeding (Table 2.14). There were no statistically significant differences among Maine counties. Breastfeeding prevalence ranged from a low of 71% in Aroostook County to a high of 84% in Cumberland (data not shown).[19]

Table 2.14. Initiation of breastfeeding by demographic characteristic among new mothers, Maine, 2008

Demographic Groups	%	95% CI
Total	78.3	(75.3, 81.1)
Age		
<20	54.3	(42.2, 65.8)
20-24	76.0	(69.5, 81.4)
25-34	82.9	(79.0, 86.2)
35+	81.9	(74.0, 87.7)
Education		
< High School	47.8	(36.1, 59.7)
High School	73.0	(67.4 ,78.0)
> High School	87.9	(84.8, 90.4)
Marital Status		
Married	85.7	(82.3, 88.5)
Other	68.2	(62.9, 73.1)
Income		
<$15,000	60.3	(52.9, 67.3)
$15,000-24,999	78.1	(69.9, 84.5)
$25,000-49,999	89.6	(84.3, 93.3)
$50,000+	85.9	(81.5, 89.4)
Enrolled in MaineCare/Medicaid		
No	86.5	(82.8, 89.5)
Yes	71.3	(66.7, 75.4)
Infant's birth weight		
<2500 grams	76.9	(73.5, 80.0)
2500+	78.4	(75.2, 81.3)

Source: Maine PRAMS[4]

Among the reasons cited by Maine mothers for not initiating breastfeeding, almost half (46.2%) of new mothers indicated that they "did not like breastfeeding." More than one-quarter (27.9%) reported that they did not breastfeed their baby because they had other children to take care of and almost one in five (17.4%) new mothers indicated that going back to work or school was a reason for not breastfeeding (Table 2.15).[19]

Table 2.15. Self-reported reasons for not breastfeeding, PRAMS, 2004-2008

Reasons for not breastfeeding among females who did not initiate breastfeeding	%	95% CI
I didn't like breastfeeding	46.2	42.9 - 49.5
I had other children to take care of	27.9	25.0 - 31.0
I went back to work or school	17.4	15.1 - 20.0
I was sick or on medication	13.4	11.3 – 15.8
I wanted my body back to myself	13.0	10.9 - 15.5
I had too many household duties	12.8	10.8 – 15.3
I didn't want to be tied down	9.8	8.0 – 11.9
I was embarrassed to breastfeed	8.0	6.4 - 10.0
My baby was sick and could not breastfeed	2.8	2.0 – 3.9

Source: Maine PRAMS[19]

Postpartum Depression

Pregnancy can be both a time of risk for mental illness (postpartum depression), but also a time of opportunity. Because women ideally have more frequent contact with health care providers during pregnancy and their reproductive years, they may be more likely to be diagnosed with and receive treatment for previously unrecognized mental health disorders. Untreated mood disorders during pregnancy have been shown to increase risks for pre-term labor, low-birth-weight babies, postpartum depression, and breastfeeding discontinuation, and to impair new mothers' ability to bond with their children. Based on a recent review of the literature, 10-15% of women suffer from mood or anxiety symptoms during pregnancy.[27]

Of 17 states studied in 2004-2005 as part of the PRAMS data set, Maine women reported lowest prevalence of postpartum depressive symptoms at 11.7%.[28] Based on 2004-2008 Maine PRAMS data, 1 in every 10 (11.3%) new mothers in Maine reported symptoms of depression after the birth of their most recent child. 8.6% of new mothers reported feeling down, depressed, or hopeless "often" or "always" after the birth of their new baby; 7.4% reported that they often or always had little interest or pleasure in doing things after the birth of their baby.[19]

Postpartum depression was more common among younger mothers, mothers with lower levels of educational attainment and income, unmarried mothers and those enrolled in MaineCare (Table 2.16). Mothers who reported that their pregnancy was unintended were almost twice as likely as mothers with intended pregnancy to report symptoms of depression after the birth of their child. Postpartum depressive symptoms were also more common among women who reported never breastfeeding, smoking after the birth of their child, and those who experienced intimate partner violence during pregnancy (Table 2.16).[19]

Table 2.16. Prevalence of postpartum depression symptoms among new mothers by demographic and health risk factors, Maine, 2004-2008

Demographic Groups	% w/postpartum depression symptoms	95% CI
Total	11.5	(10.6, 12.5)
Age		
<20	20.6	(16.2, 25.8)
20-29	13.0	(11.7, 14.5)
30+	7.4	(6.2, 8.7)
Education		
< High School	23.9	(19.7, 28.7)
High School	14.6	(12.8, 16.5)
> High School	7.2	(6.3, 8.3)
Marital Status		
Married	8.1	(7.1, 9.1)
Other	17.2	(15.3, 19.2)
Income		
<$10,000	23.4	(20.1, 27.0)
$10,000-14,999	15.0	(11.7, 19.2)
$15,000-19,999	13.9	(10.1, 18.8)
$20,000-24,999	14.5	(11.2, 18.7)
$25,000-34,999	12.6	(9.9.-15.9)
$35,000-49,999	8.2	(6.2, 10.7)
$50,000+	5.2	(4.2, 6.4)
Enrolled in MaineCare/Medicaid		
No	6.1	(5.2, 7.2)
Yes	17.2	(15.5, 18.9)
Intended pregnancy		
No	15.5	(13.8, 17.5)
Yes	9.1	(8.0, 10.2)
Smoking after pregnancy		
No	8.8	(7.9, 9.8)
Yes	20.0	(17.6, 22.7)
Ever breastfed		
No	15.8	(13.5, 18.4)
Yes	9.9	(8.9, 11.0)
Partner abuse during pregnancy		
No	11.2	(10.3, 12.2)
Yes	32.7	(22.1, 45.5)

Source: Maine PRAMS[19]

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Chapter 3: Chronic Disease

COPD, Asthma, Cancer, Diabetes, Cardiovascular Disease and Oral Health

Introduction

Chronic diseases such as heart disease, stroke, cancer, and diabetes are among the most common, costly, and preventable of all health problems in the U.S. today. Heart disease, cancer, and stroke are the three leading causes of death for women in the U.S. and in Maine.[1] Nationally, chronic diseases account for 70% of all deaths, or 1.7 million deaths each year. These diseases also cause major limitations in daily living for almost 1 out of 10 Americans (about 25 million people).[2]

Over half of all women of reproductive age have one or more serious risk factors for developing a chronic disease. The annual medical cost for treating chronic disease-related pregnancy complications prior to delivery totals over $1 billion dollars. In addition to monetary expense, chronic conditions experienced during pregnancy take a great toll on the health of a mother and her baby, and in some cases may increase the mother's and child's risk of developing chronic diseases later in life.[3]

Chronic Pulmonary Disease

Chronic Lower Respiratory Diseases are the fourth-leading cause of death among females in the U.S. and in Maine.[4] The most deadly of these diseases is chronic obstructive pulmonary disease (COPD), a group of diseases that cause airflow blockage and breathing-related problems such as emphysema, chronic bronchitis, and in some cases asthma.[5] Smoking is the leading cause of COPD deaths.[6] Other causes of COPD include: air pollution, chemical fumes, or dust.[7]

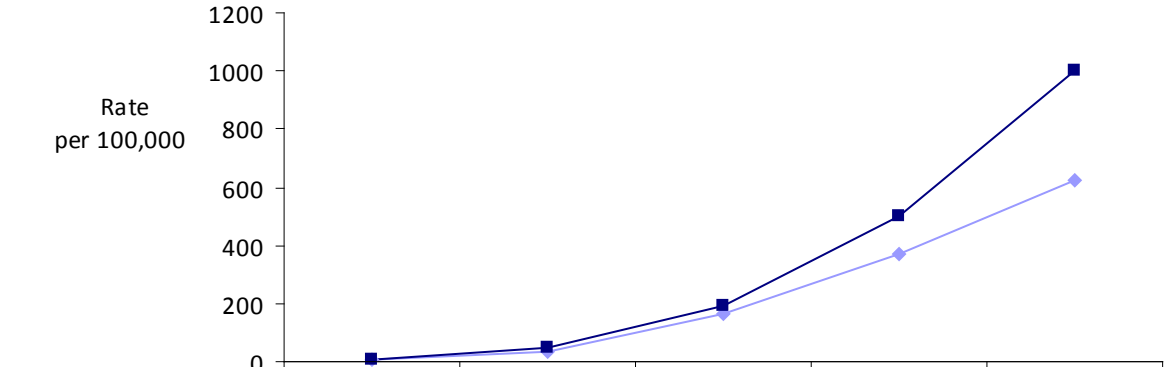
There is growing concern about the increasing prevalence of COPD in the U.S. The number of women dying from COPD in the U.S. and Maine has been increasing and research suggests that physicians are less likely to diagnose COPD among women compared to men. The symptoms COPD manifest differently in women and can have a significant impact on women's quality of life. Studies have shown that COPD symptoms in women are more severe (e.g., greater loss of lung function) and women with COPD exhibit greater levels of anxiety and depression and worse symptom-related quality of life compared to men.[8]

COPD Hospitalizations and Mortality

Mortality and hospitalization rates for COPD were higher among men than women in Maine between 2005 and 2009. On average, approximately 400 women die from COPD each year. Rates of death and hospitalizations increased with age (Figures 3.1 and 3.2; note: mortality is presented as a rate per 100,000 and hospitalizations are presented as a rate per 10,000). Until approximately age 75 years, women are as likely to die or to be hospitalized for COPD as men. However, after age 75 men are more likely to die or be hospitalized because of the disease.[9]

Figure 3.1.

Age-specific COPD mortality rates per 100,000 by sex, Maine, 2005-2009

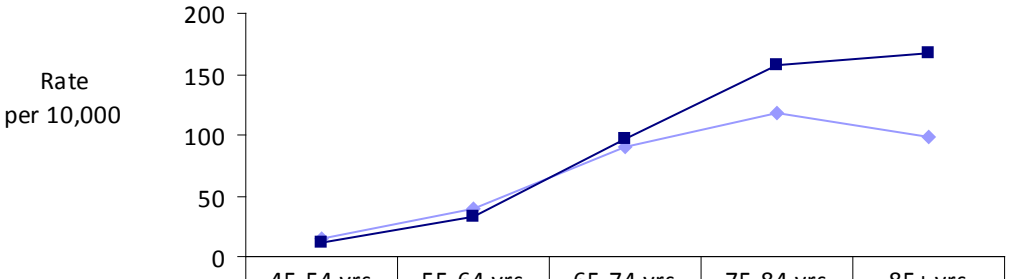


	45-54 yrs	55-64 yrs	65-74 yrs	75-84 yrs	85+ yrs
Female Death Rate	9.1	36.5	165.2	369.2	624.0
Male Death Rate	9.4	49.2	195.2	499.5	999.8

Source: Maine Vital Records Data[9]
Note: COPD= ICD10 codes J40-J44, excludes asthma, among those age 45+

Figure 3.2.

Age-specific COPD hospitalization rates per 10,000 by sex, Maine, 2005-2009



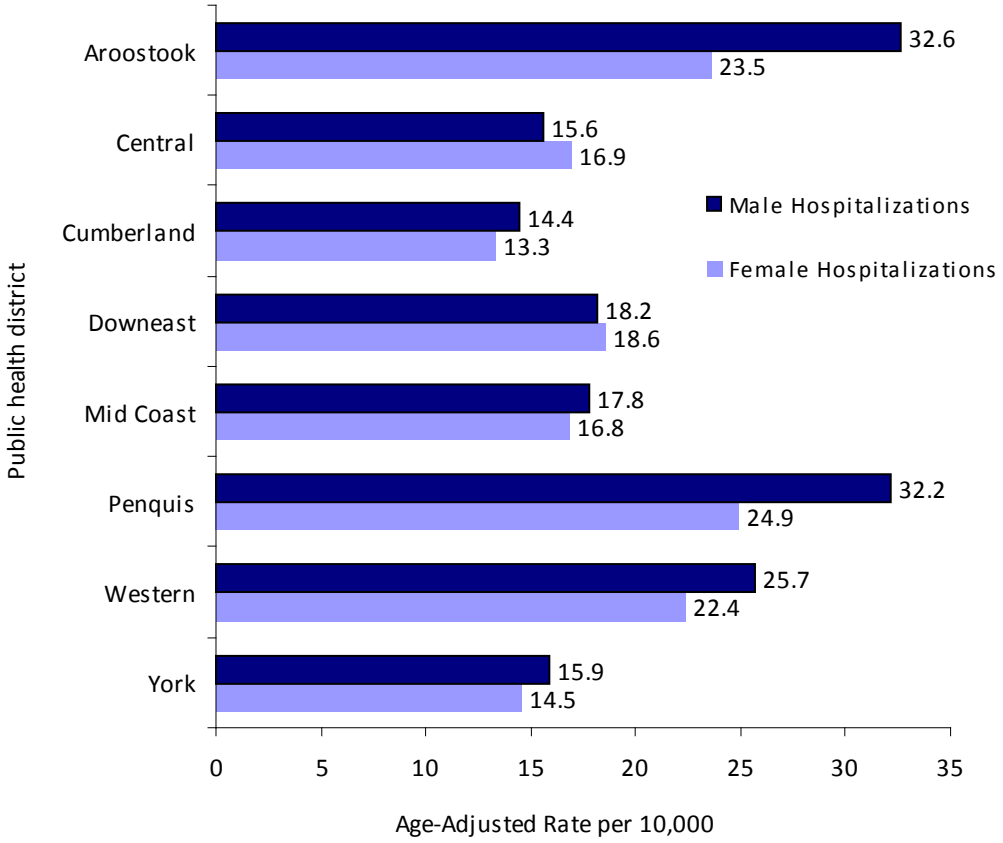
	45-54 yrs	55-64 yrs	65-74 yrs	75-84 yrs	85+ yrs
Female Hospitalization Rate	14.5	38.7	90.5	117.2	98.2
Male Hospitalization Rate	11.7	32.5	96.4	156.6	168.0

Source: Maine Hospital Discharge Data[10] Note: COPD=ICD-9CM codes 490-492, 496

Hospitalization rates for COPD among women in Aroostook, Penquis and Western public health districts were statistically higher than other public health districts in Maine. The two southern districts (Cumberland and York) had the lowest rates of hospitalizations (Figure 3.3). In Aroostook, Penquis and Western districts, men were more likely than women to be hospitalized for COPD. There were no other significant sex differences within districts.[10]

Figure 3.3.

Age-adjusted COPD hospitalization rates per 10,000
by sex and public health district, Maine, 2005-2009



Source: Maine Hospital Discharge Data[10]

Asthma

Asthma is a chronic respiratory disease associated with inflammation of the airways. Although there is no cure, symptoms can be controlled and prevented.[11, 12] Asthma is characterized by attacks with symptoms such as shortness of breath, coughing, wheezing and chest pain.[11-13] Factors which trigger asthma attacks include: allergens, dust mites, air pollutants, smoke, respiratory infections, physical activity, stress, and cold air.[14] The exact cause of asthma is unknown, however genetic and environmental factors (such as exposure to cigarette smoke, living in an urban area and obesity) may increase the risk of developing asthma.[14, 15]

Among children, asthma is more common in boys compared to girls, but this pattern reverses with age; asthma is more common among women compared to men.[12] Asthma also tends to be more prevalent for individuals living in northeastern states,[12] children, adult women, Blacks, and individuals with income below the federal poverty level.[13] If asthma is not managed properly, it can lead to increased medical costs due to high rates of hospitalizations and emergency room visits, and decreased school and work productivity due to absences.[12, 13]

Prevalence

In 2009, approximately 1 in 8 Maine women (13.4%) had been diagnosed with asthma and still have asthma. This was higher than the U.S. prevalence of 10.7%. Rates of asthma among women have not increased significantly over the past five years (Table 3.1).[16]

Sex

Women in Maine and in the U.S. have higher rates of asthma compared to their male counterparts. This disparity has been consistent over time; rates have not changed significantly since 2005 (Table 3.1).[16]

Table 3.1. Current asthma prevalence by sex, U.S. and Maine, 2005-2009

	Maine Women		US Women	Maine Men	
Year	%	(95% CI)	Median % *	%	(95% CI)
2005	12.6	(10.8 - 14.4)	10.3	7.7	(6.0 - 9.4)
2006	12.2	(10.6 - 13.8)	10.4	7.0	(5.5 - 8.5)
2007	13.1	(11.7 - 14.5)	10.4	7.2	(5.8 - 8.6)
2008	13.2	(11.8 - 14.6)	10.7	7.2	(5.9 - 8.5)
2009	13.4	(12.2 - 14.7)	10.6	8.0	(6.6 - 9.4)

Source: BRFSS[16]
*Based on 51 states

Age

Younger women are more likely than older women to report that they currently have asthma; 16.3% of women 18-24 years old reported having asthma, compared to 9.5% of women 75+ years old (Table 3.2). Among adults aged 25-74 years, asthma is more prevalent among women compared to men. The gender gap is smaller for those aged 18-24 years and those over age 75 years.[16]

Table 3.2. Current asthma prevalence in adults by age and sex, Maine, 2005-2009.

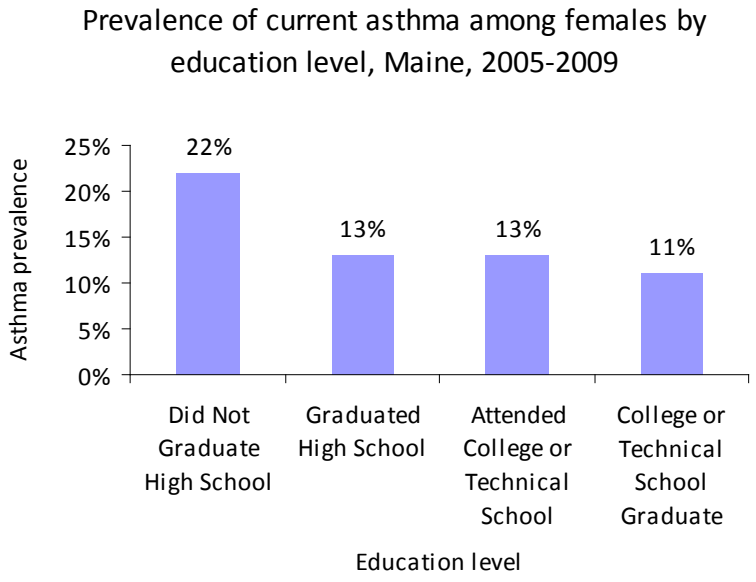
	Women		Men	
Age	%	(95% CI)	%	(95% CI)
18-24	16.3	(12.5 - 20.2)	11.0	(8.2 - 14.6)
25-34	15.4	(13.5 -17.3)	6.8	(5.0 - 8.6)
35-44	14.3	(12.7 - 15.8)	7.5	(6.1 - 8.9)
45-54	12.6	(11.4 - 13.8)	6.7	(5.6 - 7.9)
55-64	10.5	(9.4 - 11.6)	6.6	(5.5 - 7.7)
65-74	11.2	(9.8 - 12.6)	6.5	(5.1 - 7.9)
75+	9.5	(8.1 - 10.8)	7.0	(5.2 - 8.7)

Source: BRFSS[16]

Education Level

The percentage of women with current asthma was higher among those who did not graduate high school (22%) compared to those with at least a high school degree (11%-13%; Figure 3.4).[16]

Figure 3.4.

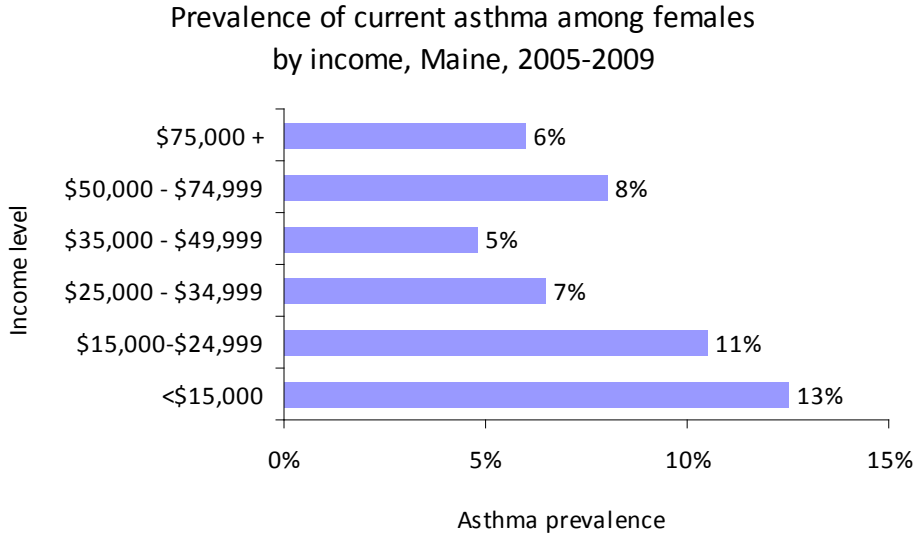


Source: BRFSS[16]

Income

Generally, women with higher annual household income were less likely to have current asthma compared to lower income women. The prevalence of asthma among women with household incomes less than $25,000 was statistically higher than women whose household incomes were greater than $25,000 (Figure 3.5).[16]

Figure 3.5.



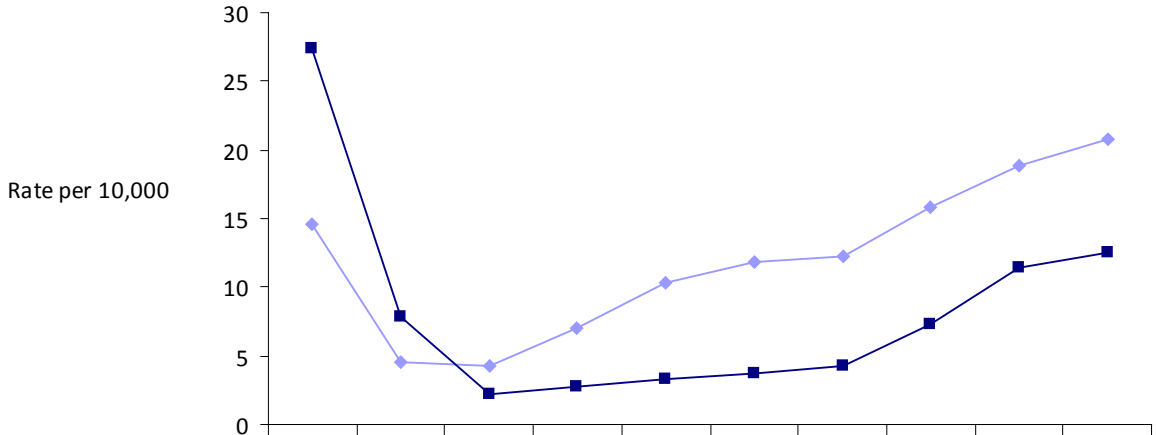
Source: BRFSS[16]

Asthma Hospitalizations and Emergency Department Visits

Similar to the pattern of asthma prevalence, hospitalization rates for asthma were higher for males than females up to 14 years of age, but among those over age 15, females had higher rates than males (Figure 3.6). Hospitalization rates for asthma were highest among very young children (less than five years of age). However, among those aged 15 and older, hospitalization rates increased with age (Figure 3.6).[10]

Figure 3.6.

Age-specific asthma hospitalization rates per 10,000 by sex, Maine, 2005-2009



	0-4 yrs	5-14 yrs	15-24 yrs	25-34 yrs	35-44 yrs	45-54 yrs	55-64 yrs	65-74 yrs	75-84 yrs	85+ yrs
Female Hospitalization Rate	14.6	4.6	4.2	7.0	10.3	11.8	12.3	15.8	18.9	20.8
Male Hospitalization Rate	27.4	7.8	2.2	2.7	3.4	3.8	4.3	7.3	11.5	12.5

Source: Maine Hospital Discharge Data[10]

A different age distribution emerges for emergency department visits. Among females, the rate of emergency department visits for asthma was highest among those 15-34 years old. For males the rate was highest among those 0 – 4 years old (Table 3.3). However, similar to hospitalizations, females over age 15 years were more likely than males to visit the emergency department due to asthma.[10, 17]

Table 3.3. Asthma emergency department visit rates (ICD-9 493, Principal) by age and sex, Maine, 2004-2008.

	Female			Male		
Age	**# ED Visits**	**Rate***	**(95% CI)**	**# ED Visits**	**Rate***	**(95% CI)**
0-4	1287	76.3	(72.2 - 80.6)	2574	143.8	(138.3 - 149.4)
5-14	1953	51.9	(49.6 - 54.2)	3333	84.6	(81.7 - 87.5)
15-34	9341	117.3	(114.9 - 119.7)	5710	70.4	(68.6 - 72.2)
35-64	10310	69.8	(68.5 - 71.2)	4815	33.9	(32.9 - 34.8)
65+	2612	47.0	(45.3 - 48.9)	1288	31.1	(29.4 - 32.9)

*Rates are expressed per 10,000 population. Data sources: Emergency department data: Maine Outpatient Hospital Discharge Data.[10]

Maine women in Penquis, Aroostook, and Western public health districts had the highest rates of hospitalization for asthma between 2005 and 2009. In all counties, more females than males were hospitalized for asthma (Table 3.4).[10]

Table 3.4. Asthma hospitalization counts and rates by sex and public health district, Maine, 2005-2009.

	Female Hospitalizations			Male Hospitalizations		
PH District	Count	Rate per 10,000	(95% CI)	Count	Rate per 10,000	(95% CI)
Aroostook	278	12.9	(11.3 - 14.6)	142	7.7	(6.4 - 9.1)
Central	416	9.0	(8.1 - 9.9)	216	5.6	(4.9 - 6.4)
Cumberland	511	6.7	(6.1 - 7.3)	324	5.2	(4.6 - 5.8)
Downeast	235	9.9	(8.6 - 11.3)	152	7.6	(6.4 - 8.9)
Mid Coast	474	10.8	(9.8 - 11.9)	198	5.7	(4.9 - 6.5)
Penquis	638	13.8	(12.7 - 14.9)	320	8.2	(7.3 - 9.2)
Western	615	12.3	(11.3 - 13.3)	347	7.8	(7.0 - 8.7)
York	380	7.0	(6.3 - 7.8)	225	4.9	(4.3 - 5.6)

Source: Maine Hospital Discharge Data[10]

Cancer

Cancer is the abnormal growth of cells in various parts of the body.[18] Cancers were the 2nd leading cause of death among all females in the U.S. in 2007, and the leading cause of death among women aged 35-64 years.[19] In Maine, cancer was the leading cause of death among females between 2004-2008.[9]

The cost of cancer is often measured in number of lives lost; however physical, emotional, and social challenges are also shouldered by cancer survivors, as well as their family members, friends, and caregivers. The financial costs of cancer also are large. According to the National Institutes of Health, cancer cost the U.S. an estimated $263.8 billion in medical costs and lost productivity in 2010.[20]

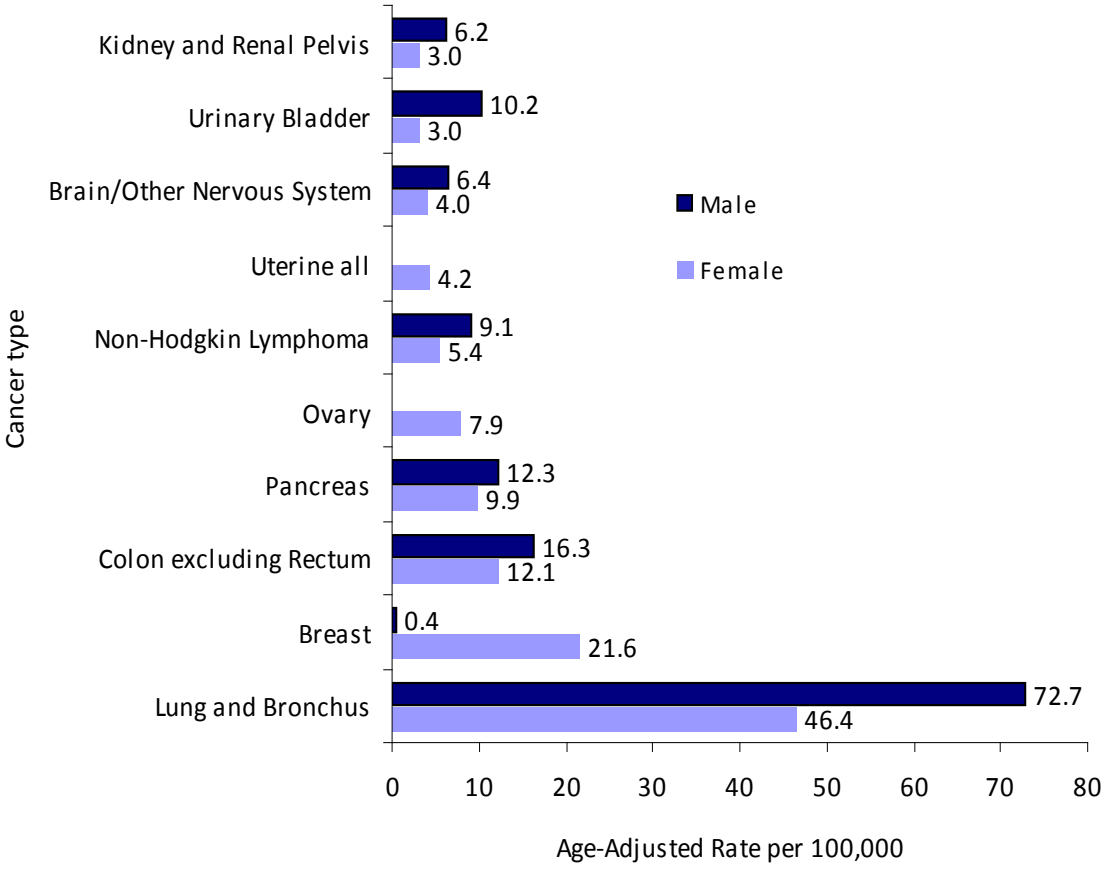
Cancer risk can be reduced by avoiding tobacco, limiting alcohol use and exposure to ultraviolet rays from the sun and/or tanning beds, eating a diet rich in fruits and vegetables, maintaining a healthy weight, being physically active, and seeking regular medical care.[20] Research shows that screening for cervical and colorectal cancer at recommended intervals can help prevent these diseases. Screening also can help identify cervical, colorectal, and breast cancers at an early, treatable stage (see Chapter 8 for data on cancer screening). Vaccines also reduce cancer risk. The human papillomavirus (HPV) vaccine helps prevent some cervical, vaginal, and vulvar cancers. Making cancer screening, information, and referral services available and accessible to all Americans can reduce cancer incidence and deaths.[20] Better treatment and new screening technologies may allow us to identify more cancers earlier, and prevent more cancer deaths.

Mortality

Lung cancer is the leading cause of cancer death for females in Maine and the U.S., although the rate of mortality is higher among males. Breast cancer is the second leading cause, and colon cancer is the third leading cause of cancer-related death among females in Maine, as well as the U.S. (Figure 3.7).[9, 19]

Figure 3.7.

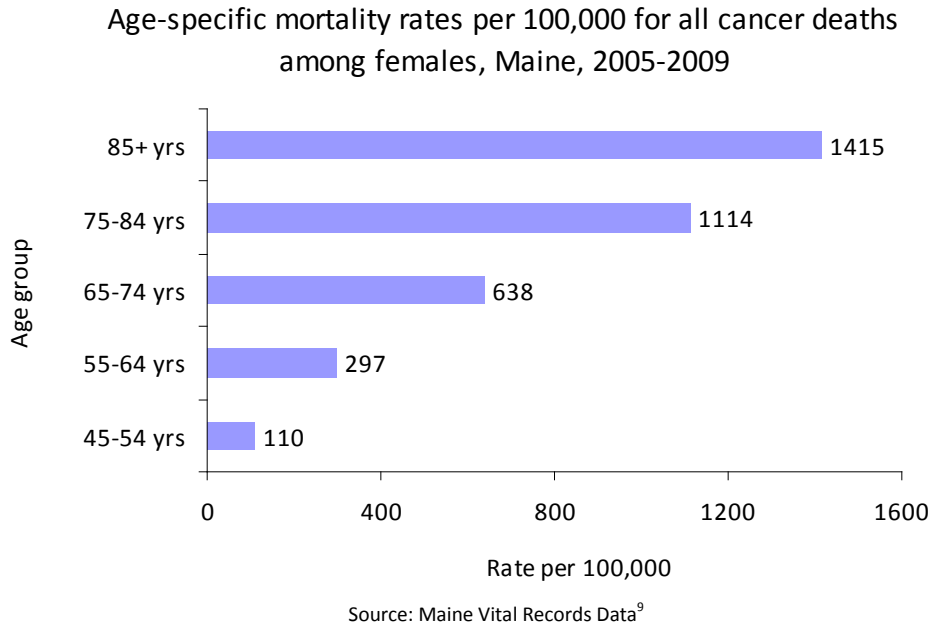
Age-adjusted mortality rates per 100,000 for the 10 leading causes of female cancer deaths by sex, Maine, 2005-2009



Source: Maine Vital Records Data[9]

Cancer death rates increase substantially with age, from 110 per 100,000 Maine women aged 45-54 years to over 1400 per 100,000 women aged 85 years and older (Figure 3.8).[9]

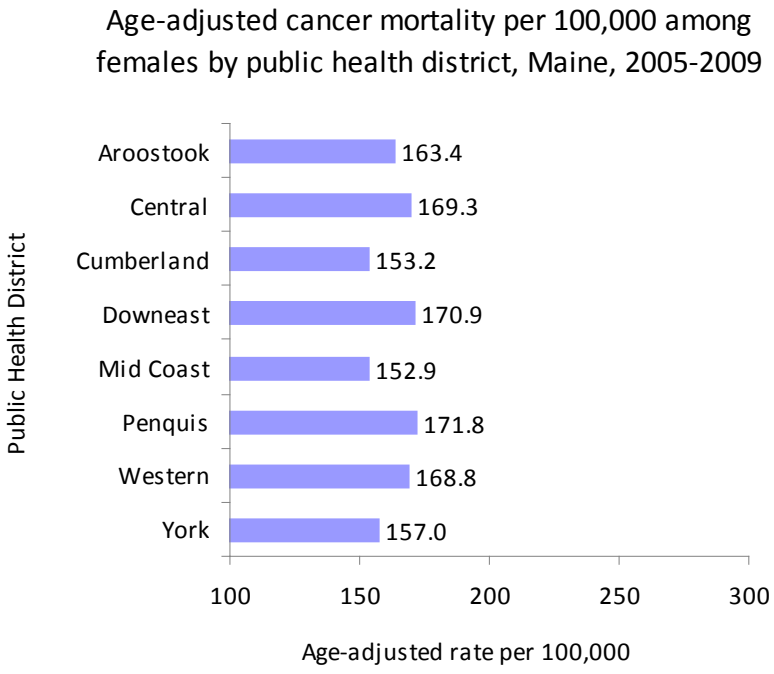
Figure 3.8.



Source: Maine Vital Records Data[9]

Based on cancer mortality rates from 2005-2009, there were no statistically significant differences in the rate of deaths by cancer among females by public health district (Figure 3.9).[9]

Figure 3.9.



Source: Maine Vital Records Data[9]

Incidence

Compared to the U.S. females, Maine females had a higher incidence of lung cancer in 2008. The incidence rates of colorectal, ovarian, and breast cancer in Maine in 2008 were not statistically different from the U.S. (Table 3.5).[21]

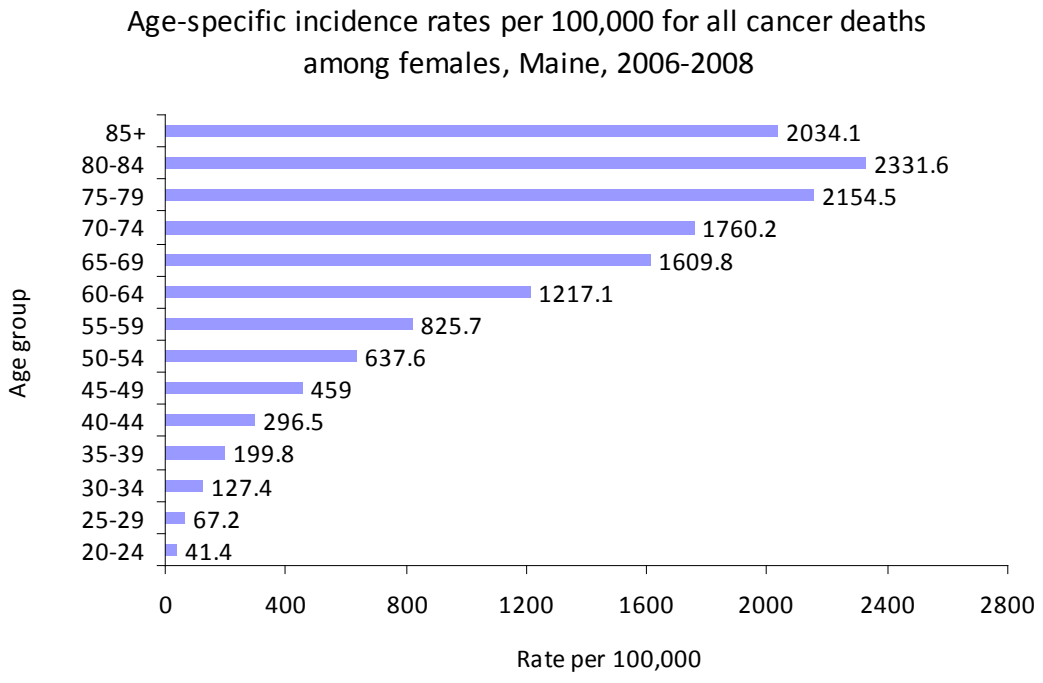
Table 3.5. Age-adjusted cancer incidence rates among females by cancer type, U.S. and Maine, 2008.

	Maine		United States*	
Cancer Type	**Rate****	**(95%CI)**	**Rate****	**(95%CI)**
Colorectal	39.9	(35.8 – 44.3)	38.7	(38.4 – 39.0)
Ovarian	11.2	(9.0 – 13.7)	12.2	(12.0 – 12.4)
Breast	124.8	(117.3 – 132.6)	121.9	(121.4 – 122.4)
Lung and Bronchus	65.1	(59.9 – 70.7)	54.5	(54.2 – 54.9)

*All Races
**Age-adjusted rate per 100,000
Maine: Source: Maine Annual Cancer Report 2011.[21]
US:Source: State Cancer Registry and the CDC's National Program of Cancer Registries Cancer Surveillance System (NPCR-CSS) November 2010 data submission. State rates include rates from metropolitan areas funded by SEER.[22, 23]

Maine cancer incidence rates, similar to mortality rates, increase with age. Between 2006-2008, the highest cancer incidence rates among females were among those over age 65 years (Figure 3.10).[21]

Figure 3.10.

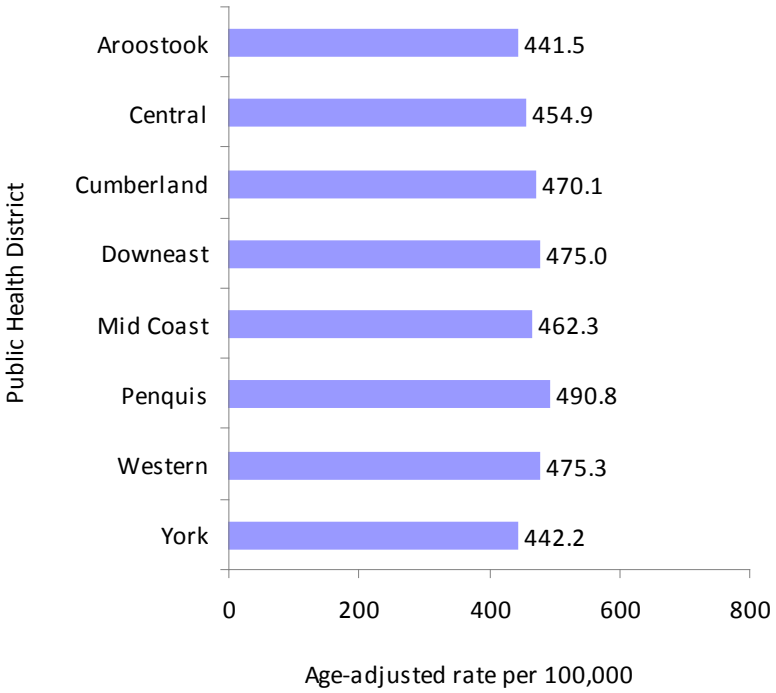


Source: Maine Cancer Report 2011[21]

Similar to cancer mortality, cancer incidence rates among females in Maine do not vary significantly by public health district (Figure 3.11).[21]

Figure 3.11.

Age-adjusted cancer incidence rates per 100,000 among females by public health district, Maine, 2006-2008



Source: Maine Cancer Report 2011[21]

Cardiovascular Disease

Cardiovascular diseases (CVD) include conditions which cause abnormal functioning of the heart and blood vessels[24]; these include:[25]

- Hypertension or high blood pressure (HBP)
- Coronary heart disease (CHD; which includes heart attack and chest pain)
- Heart failure
- Stroke

Substantial progress has been made in decreasing the burden of CVD among women. Rates of CHD among women have declined from 263.3 per 100,000 in 1980 to 95.7 in 2007.[25] Despite these gains, in the U.S. and Maine, cardiovascular diseases (CVD), including heart disease and stroke, are a leading cause of death, hospitalization and health care cost. According to 2007 national mortality data, 1 in every 3 women died of CVD. More women died of CVD than cancer, chronic lower respiratory disease, Alzheimer's disease, and unintentional injury combined.[25]

Prevention and education about cardiovascular disease has traditionally been focused on men. In 1997, only 30% of women surveyed as part of a national American Heart Association (AHA) study knew that CVD was the leading cause of death for women.[26] However, there has been increased awareness of the scope of the disease among women. In a follow-up AHA study in 2005, the rate of awareness of CVD as the leading cause of death increased to 55%, but less than half of the women surveyed were aware of healthy levels of risk factors.[27] Furthermore, many physicians may still not be aware of CVD risks among women. A 2004 national survey found that only 1 in 5 physicians knew that more women than men die each year of CVD.[28]

The direct and indirect economic costs of cardiovascular disease in the U.S. are estimated at $286 billion. Cost estimates for Maine are less readily available, but in a 2007 report, the Milken Institute estimated direct and indirect cost due to chronic diseases in the U.S. and by state for 2003. This report estimated in 2003 alone total direct costs for Maine were $230 million for heart disease, $70 million for stroke, and $150 million for hypertension. In addition, total indirect costs for Maine in 2003 were estimated at $450 million for heart disease, $120 million for stroke, and $1,333 million ($1.3 billion) for hypertension.[29]

Recent evidence suggests that there are some risk factors for CVD that are unique or more common among women, such as preeclampsia during pregnancy, gestational diabetes, depression, lupus, and rheumatoid arthritis.[30] Women can decrease their risk of CVD by not smoking, maintaining a healthy diet, engaging in physical activity, maintaining a healthy body mass index (BMI), and lowering their blood pressure and cholesterol.[30] There is evidence that assessing and addressing clinical and lifestyle risk factors for cardiovascular disease can reduce risk of first incidence and recurrence of events related to CVD.[30]

This chapter will address two risk factors associated with cardiovascular disease: high cholesterol and hypertension, as well as the two most common forms of cardiovascular disease: heart disease and stroke.[31] A discussion of some of the other risk factors associated with CVD such as obesity, poor nutrition and tobacco use can be found in Chapter 7.

Hypertension and High Cholesterol

Hypertension (high blood pressure) is defined as having systolic pressure greater or equal to 140 mm Hg or diastolic pressure greater or equal to 90 mm.[32] Hypertension increases risk for heart disease and stroke because the heart is weakened by the extra strain of pumping blood and oxygen throughout the body.[24, 25, 33]

Risk factors for the development of hypertension include: age, ethnicity, family history of hypertension, low SES, greater body weight, low levels of physical activity, tobacco use, stress, and dietary factors.[25] Women who use oral contraceptives are at increased risk of hypertension if they are overweight, have a family history of hypertension or have mild kidney disease.[24] Women who have high blood pressure that is left untreated during pregnancy may risk harming themselves and the baby.[24]

High blood pressure can be treated by reducing excess weight, avoiding excess dietary salt, reducing alcohol intake, and by taking prescription drugs if prescribed.[24, 32]
Men have a greater risk than women of developing high blood pressure until around age 55, when the risk becomes similar for both men and women. Women aged 75 and older are more likely to have high blood pressure than men in the same age cohort.[24] In the U.S. between 2005 and 2008, the prevalence of hypertension was highest among elderly (65 years or older), non-Hispanic Blacks, and those with Medicare coverage.[34]

The U.S. Preventive Services Task Force recommends screening for high blood pressure among all adults over age 18 years. They based their recommendation on the strong evidence linking high pressure to CHD and the effectiveness of treatments for high blood pressure.[35]

Cholesterol is a waxy, fat-like substance which the body needs a certain amount of to function properly.[36] If too much of a certain kind of cholesterol (low-density lipoprotein (LDL)) accumulates in the arteries, they become narrowed, making it difficult for blood to pass through to areas of the body that need it.[37, 38] Sometimes the narrowing of the artery results in a complete blockage, which can lead to a heart attack.[37] In general, LDL cholesterol levels increase with age.[39] Women's LDL tends to be lower than men's until around age 55, then women tend to have higher levels than men.[39]

Risk factors for high cholesterol include: a diet high in foods which contain saturated fats, trans-fatty acids, cholesterol or triglycerides, being overweight and lack of physical activity,[40] and genetics/family history.[41]

The National Cholesterol Education Program recommends that healthy adults get their cholesterol checked every five years.[42]

More than 1 in 3 women in Maine and the U.S. have high cholesterol, and more than 1 in 4 have hypertension. The prevalence of these conditions among women in Maine is similar to women in the U.S.. The prevalence of self-reported high cholesterol is lower among Maine women than Maine men, but the prevalence of hypertension is similar for men and women (Table 3.6)

Table 3.6. Hypertension and high cholesterol prevalence by sex, U.S. and Maine, 2005-2009.

	Maine Females		US Females	Maine Males	
	%	(95% CI)	Median % *	%	(95% CI)
High Cholesterol	36.1	(34.4 - 37.7)	36.2	42.0	(39.7 - 44.2)
Hypertension	28.7	(27.3 - 30.2)	27.8	31.4	(29.4 - 33.5)

Source: BRFSS[16]
*Based on 51 States

Heart Disease and Stroke

The most common type of **heart disease** in the U.S. is coronary artery disease, which can cause heart attacks, angina, heart failure, and arrhythmias.[43] Coronary artery disease is caused by a build-up of plaque (from cholesterol), which causes narrowing of the arteries.[43] The plaque build-up causes chest pain (angina), and over time the heart muscle becomes weakened, leading to heart failure and arrhythmia, and heart attack if the plaque results in complete blockage of the artery.[43]

Controllable risk factors for coronary artery disease include: high cholesterol, high blood pressure, diabetes, overweight, smoking, lack of physical activity, unhealthy diet and stress. Risk factors that are not modifiable include older age, male gender, and a family history of heart disease.[25]

A **stroke** occurs when the blood vessels that supply blood to the brain burst or become blocked by a clot or other particle, resulting in a lack of oxygen supply to the brain, leading to brain cell death.[24] Stroke can permanently affect speech, motor skills, senses and the ability to understand speech. Paralysis or weakness on one side of the body is a common effect. Emotional effects of stroke include depression, mood swings and laughing or crying for no reason.[24]

In contrast to men, women's risk for stroke typically exceeds their risk for coronary heart disease in middle and older age. Women are more likely than men to suffer from a stroke over the course of a lifetime. In the U.S, women accounted for 60.6% of U.S. stroke deaths in 2007.[25] This is likely because the risk of stroke increases with age and women tend to live longer than men.

Modifiable risk factors for stroke include: tobacco use, physical inactivity and obesity, excessive alcohol use, and the use of some illegal drugs.[24] Non-modifiable risks are similar to CAD and include age, family history of stroke or heart attack and stress. High blood pressure, high blood cholesterol, heart disease, diabetes, previous stroke or "mini-stroke" (transient ischemic attack), and sickle cell disease also increase an individual's risk for stroke.[24]

There are risk factors for stroke that are unique to women. These include birth control pills and hormone therapy; there is also an increase risk of stroke during pregnancy and the postpartum period.[25]

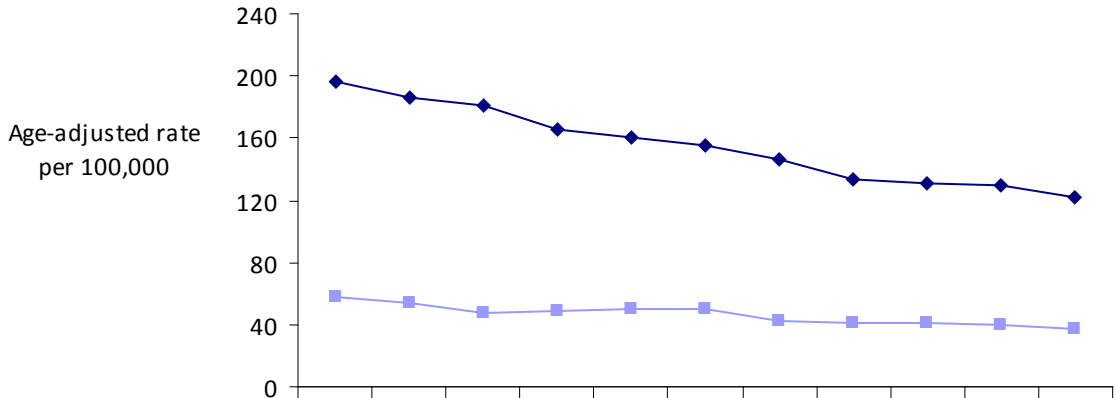
Males are at higher risk of stroke than females. Women who take oral contraceptives and smoke or have high blood pressure increase their risk of stroke.[24]

Heart Disease and Stroke Mortality

There has been a substantial decline in rates of heart disease deaths among Maine women in the past ten years. Women's stroke rate has also declined over time, but to a lesser degree (Figure 3.12).[9] This is similar to national data which have shown that women's stroke mortality rates have decreased at a slower rate compared to men.[25]

Figure 3.12.

Age-adjusted heart disease and stroke mortality rates per 100,000 females by year, Maine, 1999-2009



	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
Heart Disease Death Rate	196.0	186.0	180.7	165.7	159.9	155.9	146.8	133.2	130.4	129.8	122.3
Stroke Death Rate	57.5	54.4	47.8	49.2	50.1	49.8	42.6	41.3	40.9	39.4	37.5

Source: Maine Vital Records Data[9]

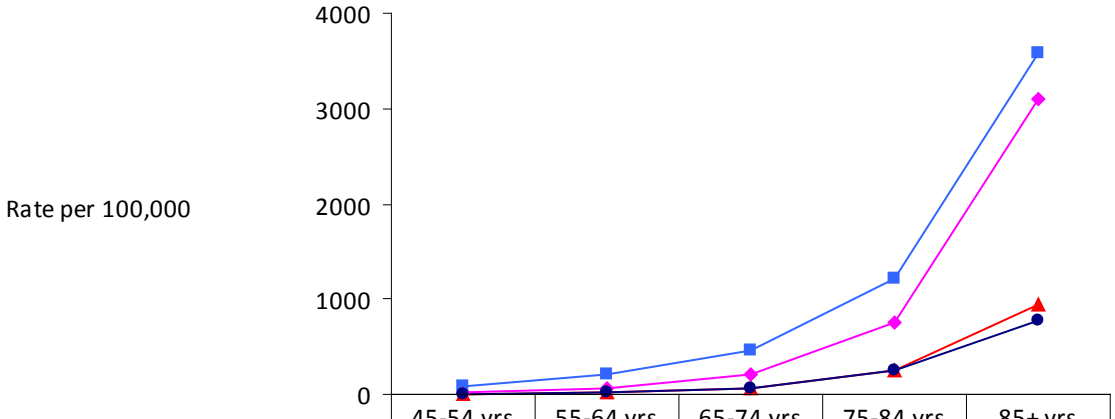
Sex and Age

Based on data from 2005-2009, Maine men had a higher rate of mortality due to heart disease among all age groups compared to Maine women. Some research has found that younger women (<age 50) who have a heart attack are at greater risk of dying in a hospital compared to men of the same age. The reasons for this are not fully understood. Older women (>75 years) are less likely than men in the same age range to die after a heart attack.[44, 45]

In all age categories the mortality rate due to stroke among men was not significantly higher than women. In the oldest age category (85+), women's stroke mortality rate was higher than men's (Figure 3.13).[9]

Figure 3.13.

Age-specific heart disease and stroke mortality rates per 100,000 by condition and sex, Maine, 2005-2009



	45-54 yrs	55-64 yrs	65-74 yrs	75-84 yrs	85+ yrs
Female Heart Disease Rate	24.5	67.5	203.8	752.8	3109.4
Male Heart Disease Rate	85.1	202.0	460.5	1207.6	3573.4
Female Stroke Rate	5.4	15.3	62.6	251.1	934.4
Male Stroke Rate	9.4	19.0	70.9	251.9	784.6

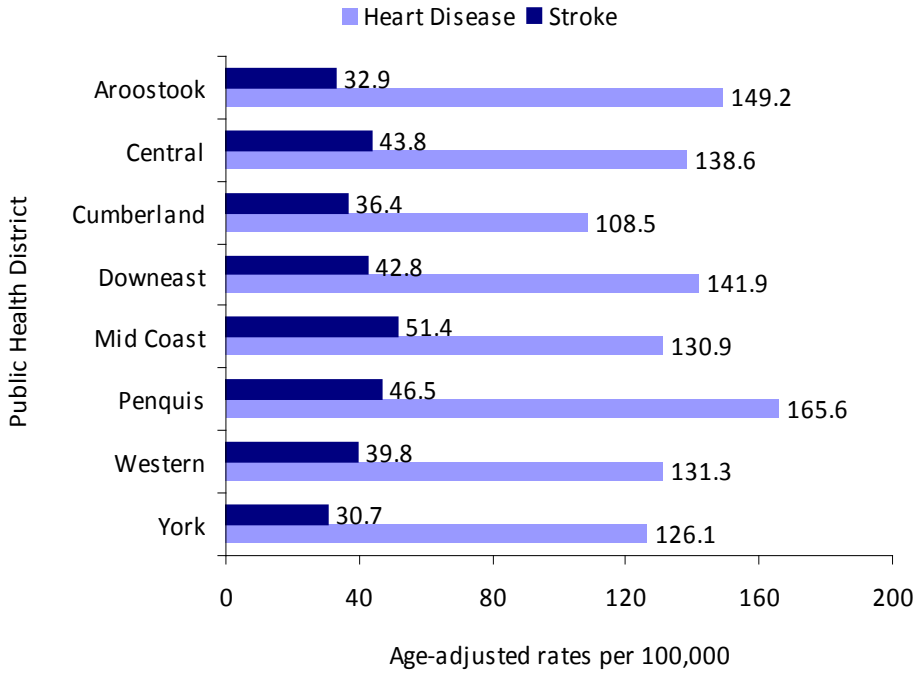
Source: Maine Vital Records Data[9]

Public Health District

Penquis and Aroostook public health districts had the highest rates of heart disease death among females in Maine; Cumberland had the lowest. The rate of stroke death was similar throughout the state (Figure 3.14).[9]

Figure 3.14.

Age-adjusted heart disease and stroke mortality rates per 100,000 among females by public health district, Maine, 2005-2009



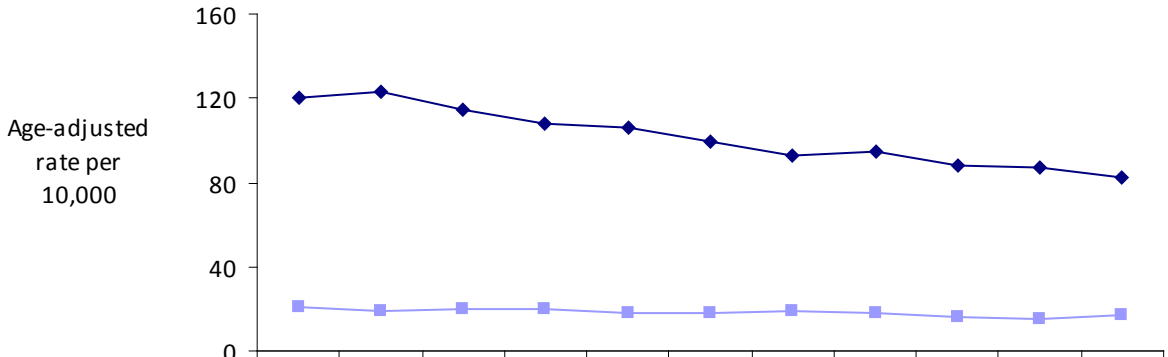
Source: Maine Vital Records Data[9]

Heart Disease and Stroke Hospitalizations

Similar to mortality rates, hospitalization rates for heart disease and stroke among Maine females have declined over the past ten years. This was especially true for hospitalizations for heart disease. During this time, there were more hospitalizations for heart disease than for stroke (Figure 3.15).[10]

Figure 3.15.

Age-adjusted heart disease and stroke hospitalization rates per 10,000 females by year, Maine, 1999-2009



	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
Heart Disease	119.8	123.5	114.5	107.8	105.6	99.4	92.7	94.7	87.6	87.3	82.7
Stroke	21.0	19.3	19.8	19.9	17.7	18.2	18.5	17.6	16.3	15.5	16.6

Source: Maine Hospital Discharge Data[10]

Age

Similar to mortality, hospitalizations for heart disease and stroke become more common as women age. The highest rates of hospitalization for both heart disease and stroke are among women aged 75-84 years (Table 3.7).

Table 3.7. Age-specific hospitalization rates (per 10,000) of heart disease and stroke among females, Maine, 2005-2009

	Heart Disease			Stroke		
Age	Count	Rate/ 10,000	(95% CI)	Count	Rate/ 10,000	(95% CI)
<5	27	1.58	(1.0 - 2.3)	7	0.4	(0.2 - 0.8)
5-14	34	0.91	(0.6 - 1.3)	8	0.2	(0.1 - 0.4)
15-24	166	3.98	(3.4 - 4.6)	23	0.55	(0.3 - 0.8)
25-34	300	7.99	(7.1 - 8.9)	53	1.41	(1.1 - 1.8)
35-44	1022	21.29	(20.0 - 22.6)	191	3.98	(3.4 - 4.6)
45-54	2823	50.56	(48.7 - 52.5)	620	11.1	(10.2 - 12.0)
55-64	5630	128.44	(125.1 - 131.8)	1148	26.19	(24.7 - 27.7)
65-74	8933	334.61	(327.7 - 341.6)	1893	70.91	(67.7 - 74.2)
75-84	12826	639.03	(628.0 - 650.2)	2957	147.33	(142.1 - 152.7)
85+	9052	952.5	(933.0 - 972.3)	2354	247.7	(237.8 - 257.9)

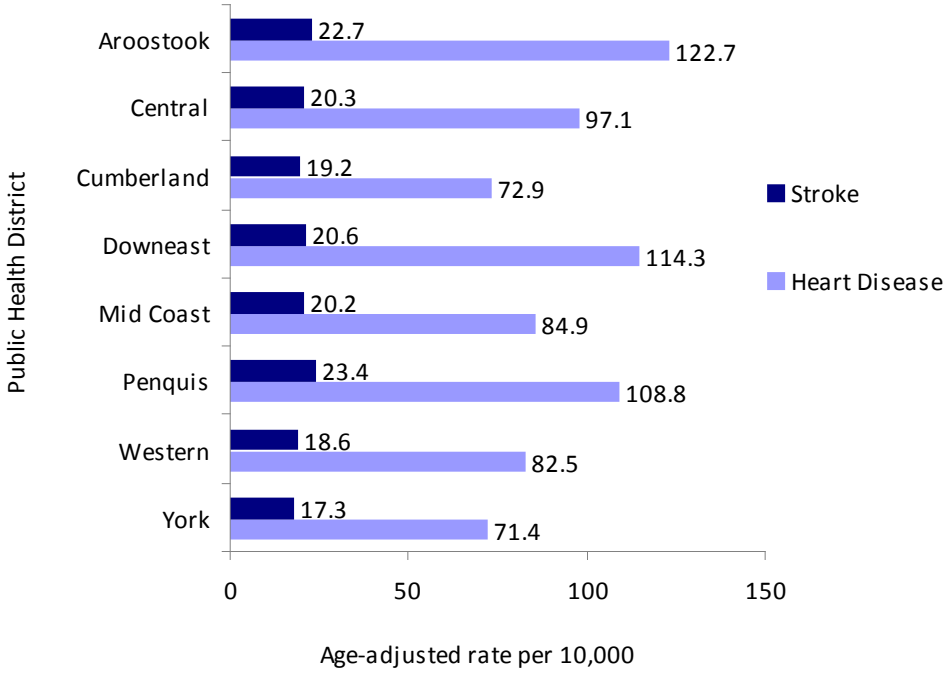
Source: Maine Hospital Discharge Data[10]

Public Health District

Penquis, Downeast and Aroostook districts had higher female hospitalization rates for heart disease than the other public health districts in Maine. Penquis and Aroostook districts also had higher female stroke hospitalization rates than most of the other public health districts (Figure 3.16).[10]

Figure 3.16.

Age-adjusted heart disease and stroke hospitalization rates per 10,000 among females by public health district, Maine, 2005-2009



Source: Maine Hospital Discharge Data[10]

Diabetes

Diabetes is a condition in which blood glucose levels are higher than normal due to poor insulin regulation.[46, 47] Diabetes can lead to other health problems and complications. Individuals with diabetes are at increased risk for cardiovascular disease, blindness and vision problems, kidney disease, nervous system disease, and dental diseases.[46] There are 3 types of diabetes: Type I (an autoimmune disease with onset or diagnosis usually during childhood; requires regular insulin injections); Type II (typically develops during adulthood; can be controlled by diet and exercise, but may require insulin or other medication); gestational (develops during pregnancy; it is similar to Type II and can be treated through diet).[31, 46] Individuals with pre-diabetes have higher glucose levels than normal (but not high enough to be classified as diabetes), which may lead to increased risk of developing diabetes and other cardiovascular diseases associated with diabetes.[48]

Non-modifiable risk factors for developing type II diabetes include: family history of diabetes, race (more common among non-Whites) and aging.[46] Modifiable risk factors for type II diabetes include obesity, hypertension, high-calorie diets, physical inactivity, excessive alcohol and tobacco use.[46, 49]

Women who have diabetes and become pregnant are at increased risk for birth defects and other pregnancy-related complications.[46] Pregnancy and birth-related complications due to diabetes include: babies becoming very large which can lead to a difficult birth and babies at high risk for becoming obese and developing diabetes.[50] Although gestational diabetes goes away after the baby is born, women who develop gestational diabetes are at increased risk for developing Type II diabetes.[31, 50] The Institute of Medicine's 2011 Committee on Preventative Services for Women recommends that pregnant women between 24 and 28 weeks of gestation be screened for diabetes, or at the first prenatal visit if they are considered high risk.[51]

Diabetes Prevalence

Sex

In Maine, data on the prevalence of diabetes come from self-reported data on the Maine BRFSS. Based on this survey, about 8% of women in Maine have been diagnosed with diabetes. Between 2005 and 2009, the prevalence of diabetes among females and males was similar and the prevalence of diabetes among Maine women was not significantly different than U.S. women in 2009. The percentage of Maine females and males with self-reported diabetes in Maine has not changed significantly over time (Table 3.8).[16]

Table 3.8. Diabetes prevalence by sex, U.S. and Maine, 2005-2009.

	Maine Females		US Females	Maine Males	
Year	%	(95% CI)	Median % *	%	(95% CI)
2005	7.2	(6.1 - 8.3)	7.1	7.8	(6.3 - 9.3)
2006	6.6	(5.6 - 7.6)	7.1	7.3	(6.0 - 8.6)
2007	7.1	(6.3 - 7.9)	7.9	8.6	(7.4 - 9.8)
2008	6.6	(5.8 - 7.4)	7.9	10.1	(8.8 - 11.4)
2009	7.9	(7.1 - 8.7)	8.2	8.8	(7.8 - 9.8)

Source: BRFSS[16]
*Based on 51 states

In 2008, the percentages of Maine women and men who reported that a doctor told them they had pre-diabetes were similar (Table 3.9).[16]

Table 3.9. Pre-diabetes prevalence by sex, Maine, 2008.

	Females		Males	
Year	%	(95% CI)	%	(95% CI)
2008	6.6	(5.6 - 7.5)	5.6	(4.7 - 6.6)

*Source: BRFSS[16]

Age

For women and men, the percentage of those with diabetes increased with age (Table 3.10). Men over age 45 years were more likely to have diabetes than older women[16]

Table 3.10. Diabetes prevalence in adults by age and sex, Maine, 2005-2009.

	Females		Males	
Age	%	(95% CI)	%	(95% CI)
18-24	0.8	(0.03 - 1.7)	1.6	(0.3 - 2.9)
25-34	1.6	(1.0 - 2.3)	1.8	(0.8 - 2.9)
35-44	3.3	(2.6 - 4.0)	3.6	(2.6 - 4.6)
45-54	6.1	(5.3 - 7.0)	8.2	(7.0 - 9.4)
55-64	10.8	(9.7 - 11.9)	13.5	(12.1 - 15.0)
65-74	15.1	(13.5 - 16.7)	20.2	(18.0 - 22.4)
75+	15.2	(13.5 - 17.0)	19.7	(16.8 - 22.6)

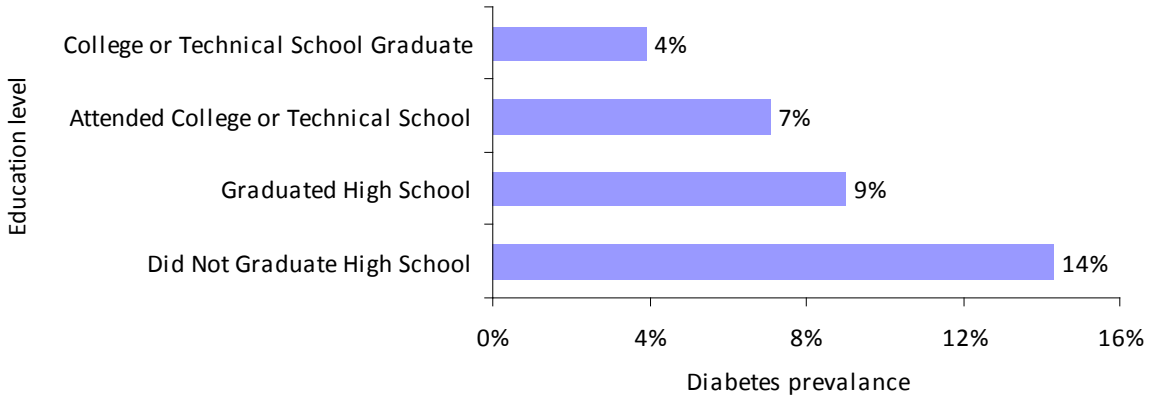
Source: BRFSS[16]

Education Level

Women who had graduated college or technical school experienced a lower incidence of diabetes than those who did not graduate. Of women who did not graduate high school, 14% had been diagnosed with diabetes, compared with 4% of women who graduated college or technical school (Figure 3.17).[16]

Figure 3.17.

Prevalence of diabetes among females by education, Maine, 2005-2009

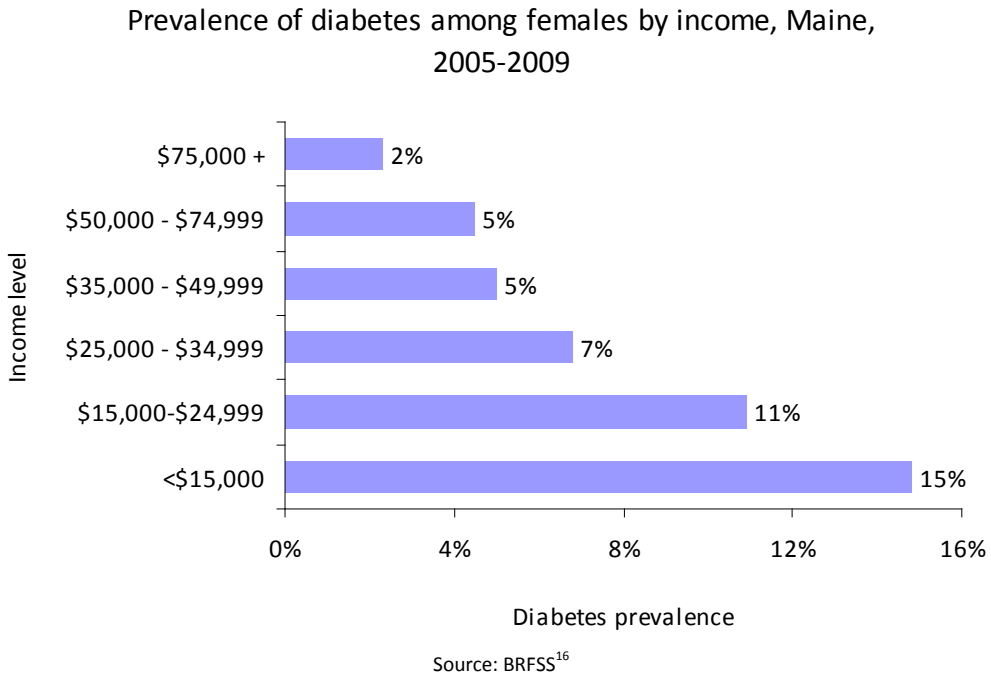


Source: BRFSS[16]

Income

The percentage of women with diabetes decreased as their income increased. Approximately 15% of women with annual household income less than $15,000 had diabetes compared to 2% of women with annual household income of $75,000 or greater (Figure 3.18).[16]

Figure 3.18.



Source: BRFSS[16]

Public Health District

The prevalence of self-reported diabetes was significantly higher for men and women in Aroostook public health district compared to the other six districts (Table 3.11). In most districts, except Western district, there were no significant sex differences in the prevalence of self-reported diabetes. In Western District, men were more likely than women to report having been diagnosed with diabetes.[16]

Table 3.11. Diabetes prevalence by public health district and sex, Maine, 2005-2009.

	Females		Males	
PH District	**%**	**(95% CI)**	**%**	**(95% CI)**
Aroostook	11.5	(9.2 - 13.7)	11.0	(8.4 - 13.5)
Cumberland	5.8	(4.9 - 6.7)	7.3	(6.0 - 8.6)
Central	7.4	(6.2 - 8.6)	9.2	(7.6 - 10.8)
Downeast	6.7	(5.4 - 8.0)	8.2	(6.3 - 10.2)
Midcoast	6.9	(6.0 - 7.9)	7.6	(6.4 - 8.8)
Penquis	8.6	(7.3 - 9.9)	9.6	(7.8 - 11.4)
Western	6.1	(5.0 - 7.1)	8.8	(7.2 - 10.3)
York	6.5	(5.4 - 7.6)	8.1	(6.5 - 9.7)

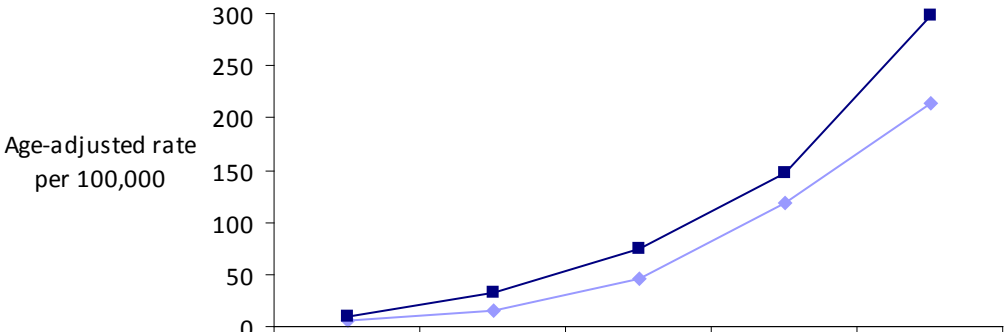
Source: BRFSS[16]

Diabetes Hospitalizations and Mortality

Compared to women, men had higher rates of mortality and hospitalizations from diabetes among all age groups. For both sexes, the rate of mortality and hospitalizations due to diabetes increased with age (Figures 3.18 and 3.19).[9]

Figure 3.19.

Age-specific diabetes mortality rates per 100,000, by sex, Maine, 2005-2009

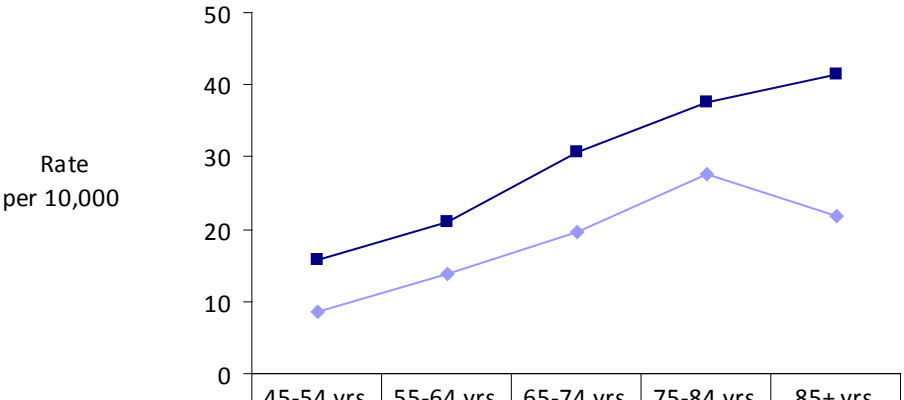


	45-54 yrs	55-64 yrs	65-74 yrs	75-84 yrs	85+ yrs
Female Rates	5.9	16.2	45.3	118.6	213.6
Male Rates	9.9	32.3	74.3	146.2	298.6

Source: Maine Vital Records Data[9]

Figure 3.20.

Age-specific diabetes hospitalization rates per 10,000, by sex, Maine, 2005-2009



	45-54 yrs	55-64 yrs	65-74 yrs	75-84 yrs	85+ yrs
Female Rates	8.6	13.9	19.6	27.6	21.8
Male Rates	15.7	21.0	30.6	37.6	41.4

Source: Maine Hospital Discharge Data[10]

Oral Health

Oral health is related to a woman's overall health. Conditions such as diabetes, heart disease, HIV, cancer, as well as birth outcomes have been linked to poor oral health.[52] Women may be at greater risk for poor oral health because female hormones can lead to an increase in cold and canker sores, dry mouth, change in taste, and gum disease.[53] Some research suggests that poor oral health during pregnancy can contribute to poor birth outcomes, such as low-birth weight infants.[52]

Gum disease and tooth decay are the most common oral diseases, and are the leading causes of tooth loss.[54, 55] The prevalence of tooth decay and cavities increases with age.[54] Lower-income, Mexican-American and African-American children and adults have more untreated decayed teeth compared to individuals who are non-Hispanic White or have higher incomes.[54] Loss of teeth results in poor diet because individuals may avoid eating fruits and vegetables since they are able to eat only soft foods.[55]

Taking good care of your teeth and gums can help you avoid or lessen oral health problems. Gum disease can be prevented and controlled by:[56]

- Drinking fluorinated water and using fluorinated toothpaste
- Brushing and flossing teeth
- Avoiding tobacco, limiting alcohol and eating wisely
- Visiting a dentist regularly

Prevalence

Sex

In 2006 and 2008 more than 1 in 5 Maine women aged 65 years or older had had all of their natural teeth extracted. There was no significant sex difference on this indicator (Table 3.12).[16]

Table 3.12. Adults aged 65+ who have had all of their natural teeth extracted by sex, U.S. and Maine, 2006 and 2008.

	Maine Females		US Females	Maine Males	
Year	%	(95% CI)	Median % *	%	(95% CI)
2006	27.9	(23.8-32.0)	20.2	23.9	(18.6-29.2)
2008	22.8	(20.2-25.5)	19.7	20.6	(17.2-23.9)

Source: BRFSS[16]
*Based on 51 states

In 2008, about 1 out of 4 Maine women had not visited the dentist within the previous 12 months (26.5%; Table 3.13).[16]

Table 3.13. Adults who did **not** visit a dentist in the past year by sex, U.S. and Maine, 2006 and 2008.

	Maine Females		US Females	Maine Males	
Year	%	(95% CI)	Median % *	%	(95% CI)
2006	27.3	(24.9-29.7)	27.8	31.1	(28.4-33.8)
2008	26.5	(24.8-28.3)	27.1	30.7	(28.4-33.0)

Source: BRFSS[16]
*Based on 51 states

Age

Maine Women over 75 years old were more likely to have had all their teeth extracted than those aged 65-74 (Table 3.14). This difference was significant for females, but not for males.[16]

Table 3.14. Adults aged 65+ who have had all their natural teeth extracted by age and sex, Maine, 2006 and 2008.

	Females		Males	
Age	%	(95% CI)	%	(95% CI)
65-74	21.4	(18.2 - 24.6)	20.6	(17.0 - 24.3)
75+	28.9	(25.2 - 32.5)	24.3	(18.9 - 29.7)

Source: BRFSS[16]

The percent of Maine women who did not see a dentist within the past year ranged from 20.6% to 36.7% depending on the age group. Women over age 75 were less likely than other age groups to have seen a dentist in the past year. About than 1 in 3 older women (aged 65+) had not seen a dentist in the past year. Among younger age groups (i.e., 25-44 years), women were more likely than men to have seen a dentist in the previous year (Table 3.15).[16]

Table 3.15. Adults who did **not** visit a dentist in the past year by age and sex, Maine, 2006 and 2008.

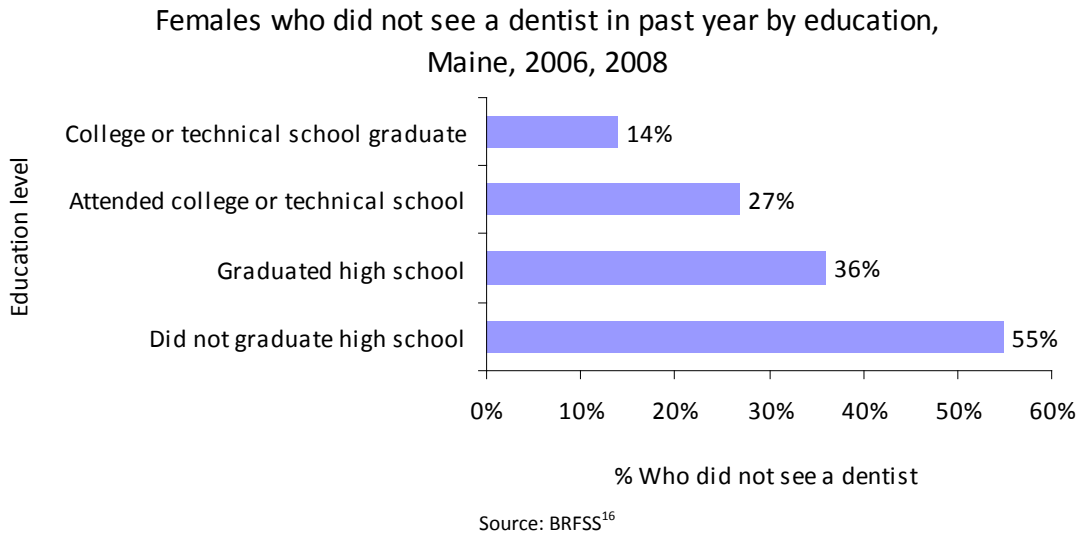
	Females		Males	
Age	%	(95% CI)	%	(95% CI)
18-24	31.7	(23.3 - 40.2)	32.2	(24.4 - 40.1)
25-34	28.9	(25.0 - 32.9)	39.9	(34.2 - 45.5)
35-44	20.6	(17.8 - 23.4)	31.2	(27.3 - 35.1)
45-54	22.2	(19.8 - 24.6)	25.5	(22.4 - 28.7)
55-64	25.9	(23.2 - 28.6)	26.6	(23.5 - 29.7)
65-74	31.0	(27.6 - 34.4)	34.1	(29.9 - 38.4)
75+	36.7	(32.9 - 40.5)	31.1	(25.4 - 36.7)

Source: BRFSS[16]

Education Level

The prevalence of Maine women who did not see a dentist in the past year decreased as their number of years of education increased. Over half of women who did not graduate high school did not see a dentist in the past year. This difference was statistically significant when compared to other levels of educational attainment (Figure 3.21).[16]

Figure 3.21.

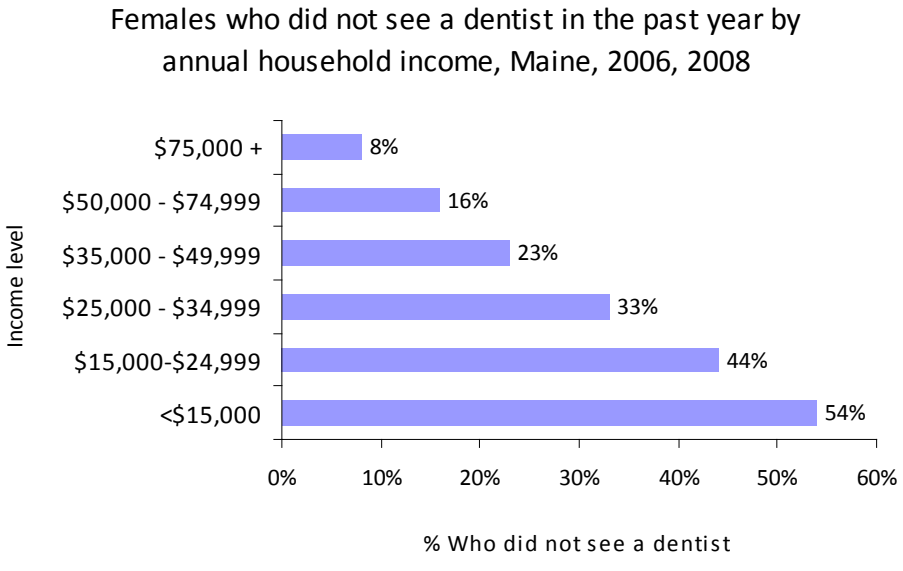


Source: BRFSS[16]

Income

Maine women with higher annual household income were more likely to see a dentist than those with lower income. More than half of women with an annual household income <$15,000 had not seen a dentist in the past year, compared to 8% of women with annual household incomes of $75,000 or more (Figure 3.22).[16]

Figure 3.22.



Source: BRFSS[16]

Public Health District

Among Maine women, there were no significant differences in the percent of women who had visited a dentist in the past year across public health districts. In Western district, men were less likely than women to have visited a dentist within the past year (Table 3.16).[16]

Table 3.16. Adults who did **not** visit a dentist in the past year by public health district and sex, Maine, 2006 and 2008.

	Females		Males	
PH District	**%**	**(95% CI)**	**%**	**(95% CI)**
Aroostook	31.2	(25.0 - 37.4)	38.7	(31.1 - 46.3)
Cumberland	21.7	(17.4 - 26.1)	24.2	(19.6 - 28.7)
Central	28.9	(25.0 - 32.8)	37.8	(32.4 - 43.2)
Downeast	31.1	(26.7 - 35.9)	30.0	(24.7 - 35.3)
Midcoast	26.4	(23.4 - 29.4)	28.6	(24.8 - 32.5)
Penquis	28.8	(24.8 - 32.8)	33.3	(28.2 - 38.4)
Western	27.6	(24.2 - 31.1)	36.5	(31.5 - 41.4)
York	24.7	(20.6 - 28.8)	23.1	(18.5 - 27.8)

Source: BRFSS[16]

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Chapter 4: Unintentional and Intentional Injury

Introduction

Injuries are often categorized as intentional (resulting from purposeful human action, whether directed at oneself or others, such as suicide or homicide), unintentional (unplanned, such as falls or car crashes), or of undetermined intent.[1] In this chapter, both unintentional and intentional injuries will be discussed. Note that if intent is not specified, the term "injury" refers to all types.

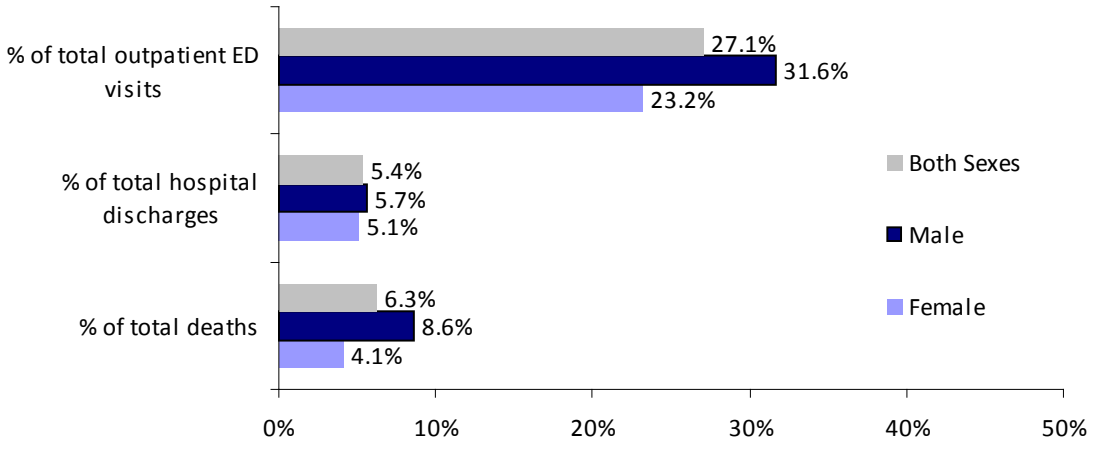
Whether intentional or unintentional, injuries inflict physical, emotional, and financial damage, including long or short-term disability, hospitalization and even death. Unintentional injury is the 6th leading cause of death among all females in Maine and the leading cause of death among women between the ages of 15 and 44 years.[2] Fortunately, many injuries are preventable. Public health efforts can raise awareness about behaviors that increase injury risk and promote practices that minimize injuries and their consequences.

Overall Injury Rates

Each year between 2004 and 2008, an average of 260 females in Maine died of an injury. In addition, there were an average of 4,479 injury-related hospitalizations and 74,074 injury-related outpatient emergency department (ED) visits among females each year. During this 5-year period, injuries accounted for 4.1% of deaths, 5.1% of hospitalizations and 23.2% of outpatient ED visits among Maine females of all ages (Figure 4.1 and Table 4.1).[2, 3]

Figure 4.1

Injury deaths, hospitalizations, and outpatient ED visits as a percent of total by sex, Maine, 2004- 2008

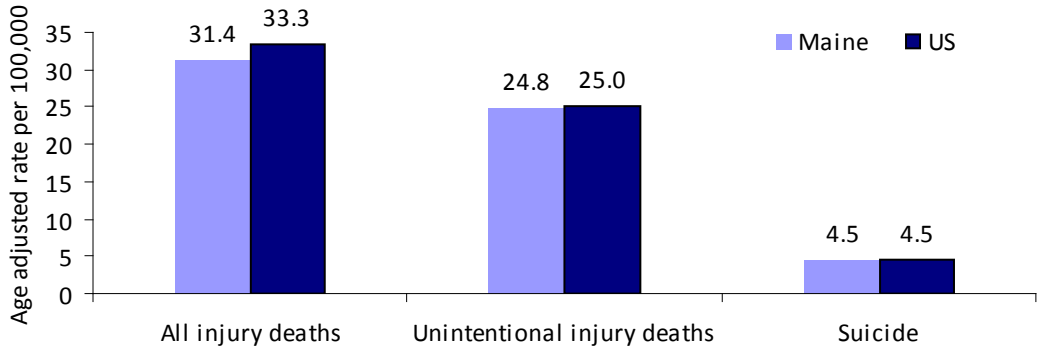


Sources: Maine Vital Records Data, Maine Hospital Discharge Data, Maine Hospital Outpatient Data[2, 3]

Maine's rates of overall injury deaths, unintentional injury deaths and suicide deaths for females were approximately the same as the U.S. in the period between 2003 and 2007[a] (Figure 4.2).[4]

Figure 4.2

Female age-adjusted rates of injury death, US and Maine, 2003-2007



Source: WISQARS[4]

Sex

Between 2004 and 2008, males were more likely to die as the result of an injury and to visit the emergency department for an injury; females had higher rates of injury-related hospitalizations (Table 4.1).[2, 3]

Table 4.1. Injury deaths, hospitalizations and emergency department rates: frequency, percent of total deaths, and rate per 100,000 by sex, Maine, 2004-2008.

		Female	Male	Both Sexes
Deaths	Number of injury deaths[a]	1,299	2,632	3,931
	Percent of total deaths	4.1%	8.6%	6.3%
	Rate per 100,000 population[c]	38.5	81.7	59.6
	95% Confidence Interval	(36.4, 40.6)	(78.6, 84.9)	(57.8, 61.5)
Hospital discharges	Discharges with injury principal diagnosis[b]	22,393	18,551	40,944
	Percent of total hospital discharges	5.0%	6.0%	5.0%
	Rate per 100,000 population[c]	663.8	576.1	620.9
	95% Confidence Interval	(655.1, 672.5)	(567.8, 584.3)	(614.9, 626.9)
Outpatient ED visits (discharged to home or self care)	Visits with injury principal diagnosis[b]	370,372	438,275	808,695
	Percent of total outpatient ED visits	23%	32%	27%
	Rate per 100,000 population[c]	10,978.3	13,609.6	12,264.1
	95% Confidence Interval	(10,943, 11,014)	(13,569, 13,651)	(12,237, 12,291)

Sources: Maine Vital Record Data, Maine Hospital Discharge Data, Maine Hospital Outpatient Data[2, 3]

[a] Injury deaths = underlying causes V01-Y36, Y85-Y87, Y89, U01-U03, Y40-Y59, Y60-Y84, Y88 (includes adverse effects)

[b] Injury principal diagnosis = 800-909.2, 909.4, 909.9-994.9, 995.5-995.59, 995.80-995.85

[c] Unadjusted (crude) rate per 100,000

[a] Most recent available data from the U.S. are from 2007

Chapter 4: Unintentional and Intentional Injury

As noted in the introduction to this report, unintentional injuries are the overall leading cause of death among women aged 15-44 years and the fourth leading cause of death among women aged 45-64 years (see Introduction, Table A.1). Suicide is the third leading cause of death among young women aged 15-24 years and the fourth leading cause of death for women aged 25-44 years. Homicide is the fifth leading cause of death among women aged 15-24 years.[2, 3]

Injuries can be classified into several specific categories based on intent and method. It is useful to examine these categories because each has its own risks and prevention strategies. When we examine injury-related deaths alone, motor vehicle crashes were the leading cause of injury deaths among Maine females between 2004-2008, followed by unintentional poisonings, unintentional falls, and unintentional suffocation (Table 4.2). Although intentional injury was not among the five leading causes of injury-related deaths among females, suicide-related injury (self-inflicted poisoning) was the 6th leading cause of injury death and homicide was the 10th leading cause of injury death among females of all ages in Maine.[2, 3]

Falls were the leading cause of injury-related hospitalizations and outpatient emergency department visits for both females and males in Maine between 2004 and 2008 (Table 4.2). Self-inflicted poisoning was the second leading of cause of injury hospitalization among females.[2, 3]

Table 4.2. Leading causes of injury deaths, hospitalizations and outpatient ED visits by sex, Maine, 2004-2008

	Injury Deaths		Injury Hospitalizations		Injury Outpatient ED visits	
Rank	**Women (1,299)**	**Men (2,632)**	**Women (22,393)**	**Men (18,551)**	**Women (370,372)**	**Men (438,275)**
1	Unintentional MV traffic 288	Unintentional MV traffic 574	Unintentional Fall 12, 542	Unintentional Fall 7,012	Unintentional Fall 103,109	Unintentional Fall 87,396
2	Unintentional Poisoning 229	Unintentional Poisoning 456	Self-inflicted Poisoning 2,086	Unintentional MV traffic 2,740	Unintentional Overexertion 45, 370	Unintentional Struck by, against 64,719
3	Unintentional Unspecified 182	Suicide Firearm 429	Unintentional MV traffic 1,832	Self-inflicted Poisoning 1,314	Unintentional Struck by, against 39,518	Unintentional Cut/Pierce 48,875
4	Unintentional Fall 172	Unintentional Fall 229	Unintentional Poisoning 925	Unintentional Transport, other 932	Unintentional MV traffic 26,719	Unintentional Overexertion 46,014
5	Unintentional Suffocation 67	Suicide Suffocation 146	Unintentional Unspecified 489	Unintentional Poisoning 926	Unintentional Cut/Pierce 24,005	Unintentional Other spec, classifiable 24,536

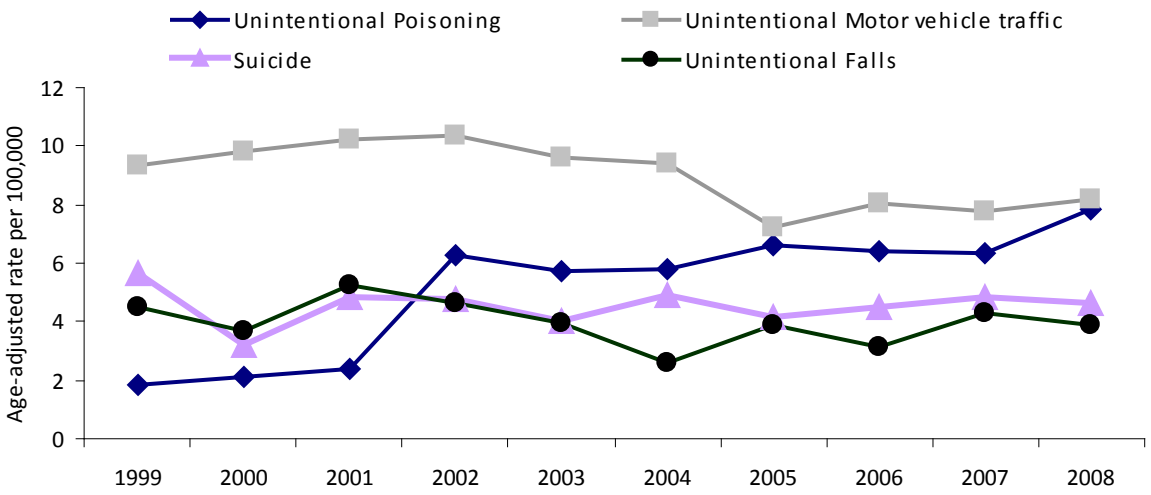
Sources: Maine Vital Record Data, Maine Hospital Discharge Data, Maine Outpatient Hospital Discharge Data[2, 3]

The four priorities of Maine's Injury Prevention Program are unintentional motor vehicle crashes, unintentional poisoning, unintentional falls, and suicide.[5] While motor vehicle deaths have

decreased slightly over time, unintentional poisoning deaths have been increasing among Maine females, even surpassing motor vehicle crash deaths among women aged 25-54 years (Table 4.4). Poisoning-related mortality among females and males in Maine increased sharply in 2002 and has continued to increase in recent years, although less dramatically (Figure 4.3).[2, 4]

Figure 4.3

Age-adjusted rates of leading causes of injury deaths among females, Maine, 1999-2008



Sources: 1999-2007 WISQARS[4], 2008 Maine Vital Records Data[2]

Among females in Maine, between 2004 and 2008, there were 288 motor vehicle crash deaths (8.6 per 100,000), 229 deaths by unintentional poisoning (6.9 per 100,000), 172 deaths by an unintentional fall (5.2 per 100,000) and 163 suicides (4.9 per 100,000). Injury-related deaths by these causes were more common for males compared to females during this time period. However, females were more likely than males to be hospitalized for an unintentional fall or self-inflicted injury (e.g., suicide attempt), and women were as likely as men to be hospitalized for unintentional poisoning. Motor vehicle crash-related injuries, unintentional falls, and self-inflicted injuries that resulted in an outpatient ED visit were more common among females than males. Females and males had equivalent rates of outpatient ED visits for unintentional poisoning (Table 4.3).[2, 3]

Table 4.3. Frequencies and rates of deaths, hospitalizations and outpatient ED visits for the Maine Injury Prevention Program priority areas by sex, Maine, 2004-2008.

	Total			Male			Female		
	Number	Rate/ 100,000	95% CI	Number	Rate/ 100,000	95% CI	Number	Rate/ 100,000	95% CI
Deaths[a]									
Motor vehicle	862	13.2	(12.3, 14)	574	17.9	(16.4, 19.3)	288	8.6	(7.6, 9.6)
Suicide	868	13.2	(12.4, 14.1)	705	21.9	(20.3, 23.6)	163	4.9	(4.1, 5.6)
Unintentional fall	401	6.1	(5.5, 6.7)	229	7.1	(6.2, 8)	172	5.2	(4.4, 5.9)
Unintentional poisoning	685	10.5	(9.7, 11.2)	456	14.2	(12.9, 15.5)	229	6.9	(6, 7.8)
Hospital discharges[b]									
Motor vehicle	4,572	69.8	(67.7, 71.8)	2,748	85.5	(82.3, 88.7)	1,838	55.1	(52.6, 57.6)
Self-inflicted injury	3,647	55.7	(53.8, 57.5)	1,475	45.9	(43.5, 48.2)	2,172	65.1	(62.4, 67.8)
Unintentional fall	19,554	298.4	(294.2, 302.6)	7,012	218.1	(213, 223.2)	12,542	375.9	(369.3, 382.5)
Unintentional poisoning	1,851	28.2	(27, 29.5)	926	28.8	(27, 30.7)	925	27.7	(25.9, 29.5)
Outpatient emergency department visits[b,c]									
Motor vehicle	49,115	749.5	(742.8, 756.1)	22,369	695.9	(686.8, 705)	26,742	801.5	(791.9, 811.1)
Self-inflicted injury	5,938	90.6	(88.3, 92.9)	2,784	86.6	(83.4, 89.8)	3,154	94.5	(91.2, 97.8)
Unintentional fall	190,515	2907.1	(2894.1, 2920.2)	87,396	2718.8	(2700.8, 2736.9)	103,109	3090.2	(3071.3, 3109)
Unintentional poisoning	5,317	81.1	(79, 83.3)	2,666	82.9	(79.8, 86.1)	2,651	79.5	(76.4, 82.5)

Source: Maine Vital Records Data,[2] Maine Outpatient ED Hospital Discharge Data, Maine Hospital Discharge Data[3]

[a] Injury deaths = underlying cause of death of V01-Y36, Y85-Y87, Y89, U01-U03, Y40-Y59, Y60-Y84, Y88 (includes adverse effects)

[b] Injury principal diagnosis = 800-909.2, 909.4, 909.9-994.9, 995.5-995.59, 995.80-995.85

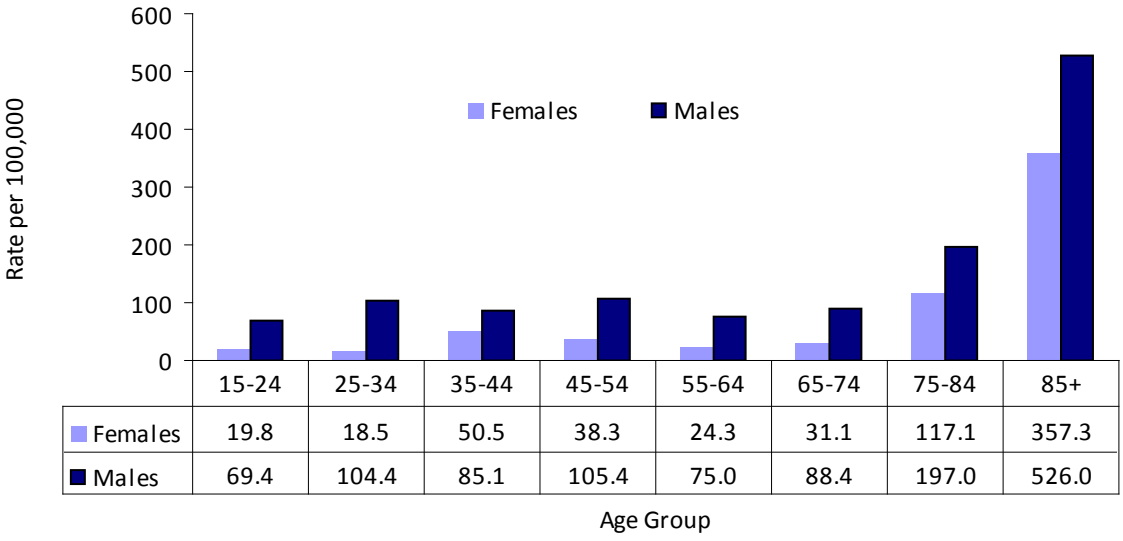
[c] discharged to home or self care

Age

Injury mortality and hospitalization rates in 2008 were highest among men and women over age 85. Injury hospitalizations for women and men are more common as they age, but injury hospitalizations are more prevalent among older women compared to men (Figure 4.5).[3] Deaths due to injury are more common for men compared women in all age groups (Figures 4.4).[2]

Figure 4.4.

Age-specific injury mortality rates by sex and age, Maine, 2008



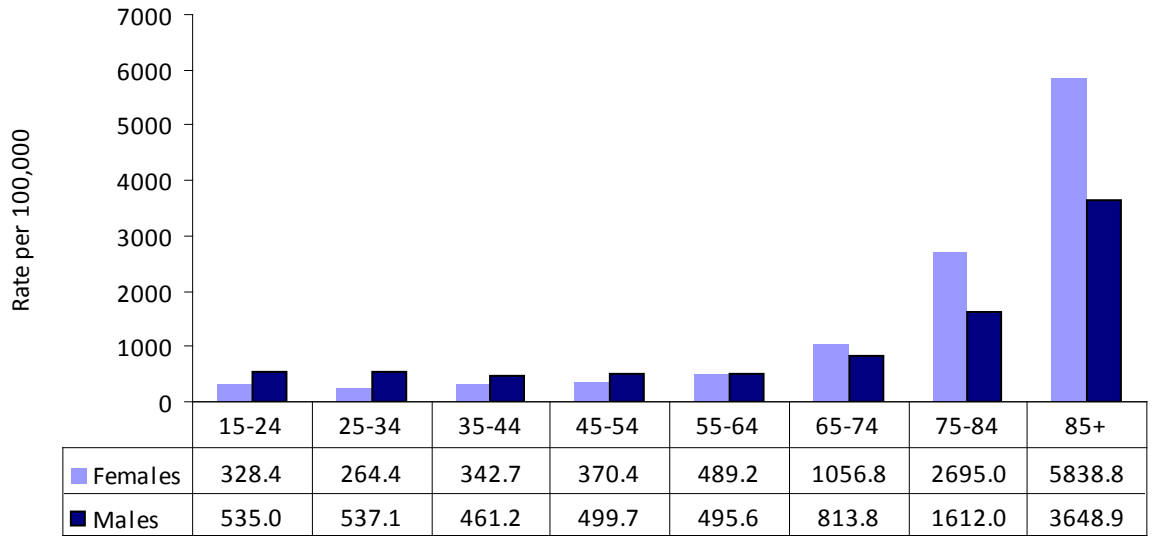
	15-24	25-34	35-44	45-54	55-64	65-74	75-84	85+
Females	19.8	18.5	50.5	38.3	24.3	31.1	117.1	357.3
Males	69.4	104.4	85.1	105.4	75.0	88.4	197.0	526.0

Age Group

Source: Maine Vital Records Data[2]

Figure 4.5.

Age-specific injury hospitalization rates by sex and age, Maine, 2008



	15-24	25-34	35-44	45-54	55-64	65-74	75-84	85+
Females	328.4	264.4	342.7	370.4	489.2	1056.8	2695.0	5838.8
Males	535.0	537.1	461.2	499.7	495.6	813.8	1612.0	3648.9

Age Group

Source: Maine Hospital Discharge Data[3]

Chapter 4: Unintentional and Intentional Injury

Among Maine women, age has a strong influence on the type of injuries they experience. Between 2004 and 2008, the leading causes of injury-related deaths among young women aged 15-44 years were motor vehicle crashes, unintentional poisoning, suicide and homicide. As women age, homicide is less likely to appear among the leading five causes of deaths and women are more likely to die of a fall-related injury (Table 4.4).[2]

Among women between the ages of 65 and 74 years old and those over age 85 years, unintentional falls were the second leading cause of injury-related deaths between 2004 and 2008; among women between the ages of 75 and 84 years, falls were the leading cause of injury-related death. In that same period, unintentional poisoning was the leading cause of injury death among women aged 25-54 (Table 4.4).[2]

Table 4.4. Leading causes of injury mortality among females by age, Maine, 2004-2008.

	Age	15-24	25-34	35-44	45-54	55-64	65-74	75-84	85+
	(Total deaths)	(125)	(99)	(184)	(174)	(115)	(206)	(412)	(766)
Rank (# deaths)	1	Unintentional MV traffic (2)	Unintentional Poisoning (n=30)	Unintentional Poisoning (n=64)	Unintentional Poisoning (n=82)	Unintentional MV traffic (n=32)	Unintentional MV traffic (n=23)	Unintentional fall (n=53)	Unintentional Unspecified (n=124)
	2	Unintentional Poisoning (n=23)	Unintentional MV traffic (n=29)	Unintentional MV traffic (n=49)	Unintentional MV traffic (n=22)	Suicide poisoning (n=22)	Unintentional fall (n=17)	Unintentional Unspecified (n=44)	Unintentional fall (n=80)
	3	Suicide suffocation (n=9)	Suicide suffocation (n=7)	Suicide poisoning (n=17)	Suicide poisoning (n=16)	Unintentional Poisoning (n=14)	Unintentional Poisoning (n=6)	Unintentional MV traffic (n=38)	Unintentional Suffocation (n=31)
	4	Suicide firearm (n=4)	Suicide firearm (n=5)	Suicide firearm (n=13)	Suicide firearm (n=12)	Unintentional fall (n=9)	Unintentional Unspecified (n=6)	Unintentional Suffocation (n=16)	Unintentional MV traffic (n=20)
	5	Homicide unspecified (n=4)	Homicide firearm (n=5)	Homicide firearm (n=6)	Unintentional fall (n=6)	Suicide suffocation (n=4)	Unintentional Suffocation (n=6)	Adverse effects (n=13)	Adverse effects (n=9)

Source: Maine Vital Records Data[2]

Public Health District

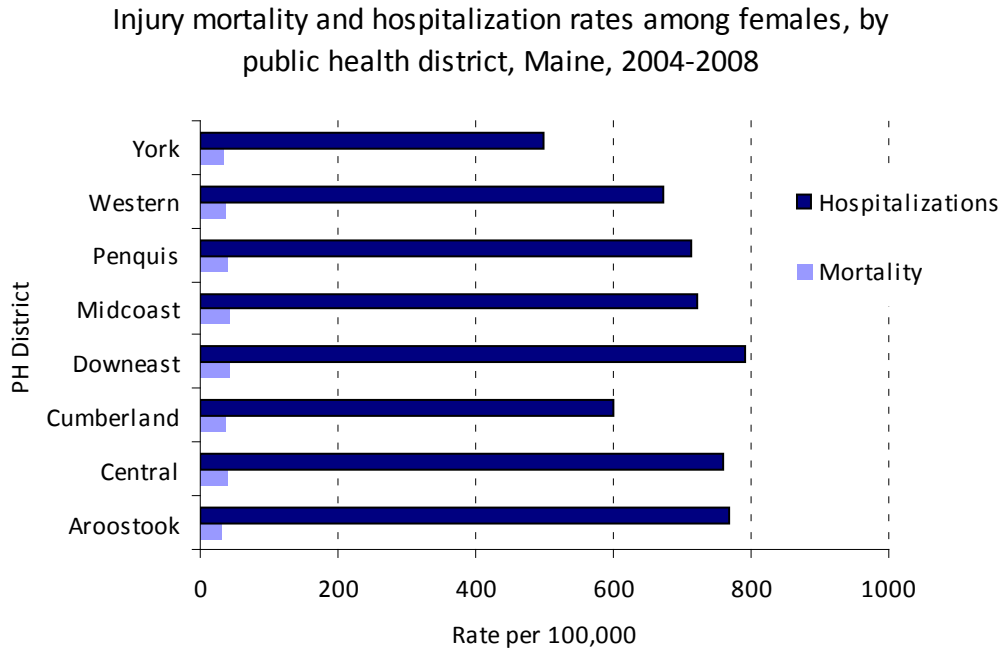
Between 2004 and 2008, rates of injury deaths among females in Maine did not vary by public health district (Table 4.5; Figure 4.6). However, Cumberland and York counties had significantly lower rates of injury-related hospitalizations and outpatient emergency department visits compared to other districts (Table 4.5; Figure 4.6).[2, 3]

Table 4.5. Rates of injury deaths, hospitalization and emergency department visits among females by public health district, Maine, 2004-2008.

	Deaths		Hospitalizations		Outpatient ED visits	
	Rate per 100,000	Margin of error	Rate per 100,000	Margin of error	Rate per 100,000	Margin of error
Aroostook	33.1	(±8.3)	768.2	(±40)	13813.7	(±169.6)
Central	39.9	(±5.9)	759.5	(±25.7)	13,597.6	(±108.9)
Cumberland	37.3	(±4.5)	600.5	(±18.1)	9262.5	(±71.1)
Downeast	44.2	(±8.8)	792.4	(±37.3)	11826.6	(±144)
Midcoast	43.4	(±6.6)	722.2	(±26.9)	10976.6	(±105)
Penquis	40.1	(±6.1)	714.0	(±25.5)	10441.1	(±97.6)
Western	38.8	(±5.5)	673.7	(±22.9)	12022.0	(±96.6)
York	34.0	(±5)	497.3	(±19.3)	9,384.1	(±83.7)

Sources: Maine Vital Record Data, Maine Hospital Discharge Data, Maine Hospital Outpatient Data[2, 3]

Figure 4.6



Sources: Maine Vital Record Data, Maine Hospital Discharge Data[2, 3]

Violence Against Women

Violence against women includes intimate partner violence, domestic violence and sexual assault. These kinds of violence are defined by a pattern of coercive behaviors which may include social isolation, deprivation, intimidation, psychological abuse, childhood physical or sexual abuse, sexual assault, or repeated battering. Intimate partner violence (IPV), domestic violence (DV) and sexual assault (SA) are most often perpetrated by someone who is or was involved in a familial or intimate relationship with the victim. Women and girls of all ages are vulnerable to this kind of violence.[6]

Health consequences of IPV, DV, and SA include: sexually transmitted infections, pregnancy, adverse psychological responses, injury and death.[6] The National Centers for Disease Control and Prevention estimates that IPV, rape, stalking and SA cost the U.S. more than $5.8 billon each year, with the majority of that cost going to direct medical and mental health care services. Women experiencing IPV have medical costs that are an average of 60% higher than other women.[6]

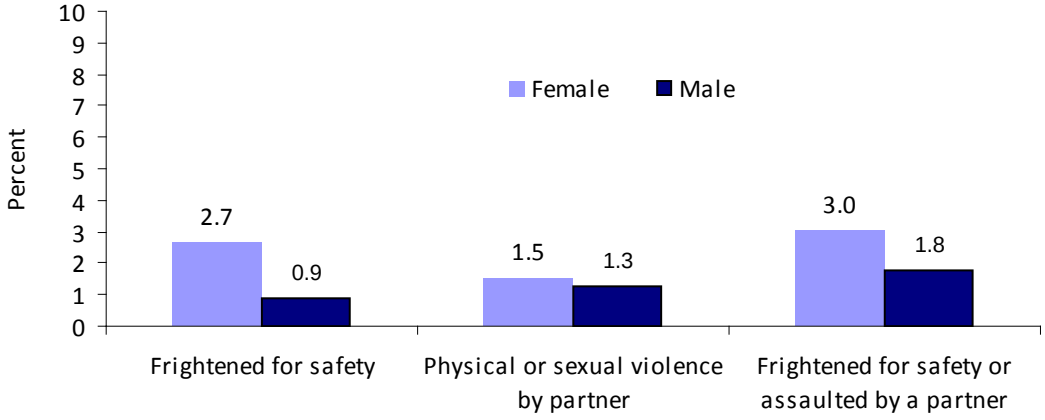
Intimate Partner Violence

Each year almost 14,000 women in Maine (2.7%) are frightened for their safety or the safety of their family or friends because of anger or threats by a current or former intimate partner (Figure 4.7).[7]

Annually, over 7,500 women in Maine (1.5%) are physically or sexually assaulted by a current or former intimate partner (Figure 4.7).[7] National surveys, such as the National Violence Against Women Survey, conducted in 1995-1996, have found similar rates of intimate partner violence nationally (1.5%).[8]

Figure 4.7

Intimate partner violence in the past year among adults by sex, Maine, 2007-2008



Source: Behavioral Risk Factor Surveillance System (BRFSS)[7]

Maine women were more likely than men to report being frightened for their safety due to threats from their partner. In addition, women were more likely to be injured by an intimate partner; over half (61%) of the women who were physically or sexually assaulted by a partner in 2007 and 2008 were injured as a result of the violence, compared to 40% of men.[7]

Domestic Assaults Reported to Police

Crime reports reveal that a domestic assault is reported to Maine police every 91 minutes.[9] Domestic assault data includes abuse between household and family members. This includes abuse between men and women, parent assaults on children, child assaults on parents, and other domestic assaults. In 2009, there were 5,287 domestic assaults reported to police, representing almost half (45.4%) of all reported assaults.[9] On average, about 45% of homicides in Maine each year are related to domestic conflicts.[9-13]

The number of DV assaults reported to police in Maine increased consistently each year between 1998 and 2007. In 1998, there were 3,855 domestic violence assaults reported (34% of the total assaults in the state). Between 1998 and 2007 the number of reported domestic violence assaults increased 50% reaching a ten-year high of 5,554 and accounted for 48% of all assaults in Maine.[10] Between 2007 and 2009, domestic assaults reported to law enforcement declined 4.8%.[9-11]

Public Health District

In 2009, the highest rates of arrests for domestic violence assaults were in the Central, Western and York Public Health Districts; the lowest rates were in Downeast, Midcoast, Penquis and Aroostook Districts (Table 4.6).[9]

Table 4.6. Rate and number of domestic violence assaults reported to police by public health district, Maine, 2009.

PH District	# DV Assaults	Rate per 10,000	95% CI
Aroostook	209	29.2	(25.3, 33.2)
Central	915	53.2	(49.7, 56.6)
Cumberland	1046	37.6	(35.3, 39.8)
Downeast	231	27.0	(23.5, 30.5)
Midcoast	424	28.3	(25.6, 30.9)
Penquis	490	29.5	(26.9, 32.1)
Western	964	50.1	(46.9, 53.2)
York	1008	49.9	(46.8, 53)
Total	5287	40.1	(39.0, 41.2)

Source: Crime in Maine, 2009 report[9]

Sexual Assault

Data from the 2006 Behavioral Risk Factor Surveillance System estimated that 16.2% of Maine women and 3.2% of Maine men have ever been the victim of rape or attempted rape during their lifetime; 1.5% of women and 0.7% of men reported a rape or attempted rape in the past year.[7]

According to the National Survey of Violence Against women, nationally 17.6% of women were ever the victims of a rape or attempted rape and 0.3% had been raped in the previous year.[8] Among women who were sexually assaulted in Maine, 97% reported that the perpetrator was male.[7]

In a separate 2006 crime survey of adults in Maine, nearly 1 in 5 Mainers reported that they have been the victim of rape or attempted rape during their lifetime; 28.5% of female respondents and 7.4% of male respondents had experienced this crime at some point in their lives.[14]

Age

In 2006, adult women under age 35 in Maine were more likely than women over the age of 55 years to have experienced a rape or attempted rape (Table 4.7).[7] This is consistent with national statistics.[8]

Table 4.7. Prevalence of lifetime rape or attempted rape among females by age, Maine, 2006.

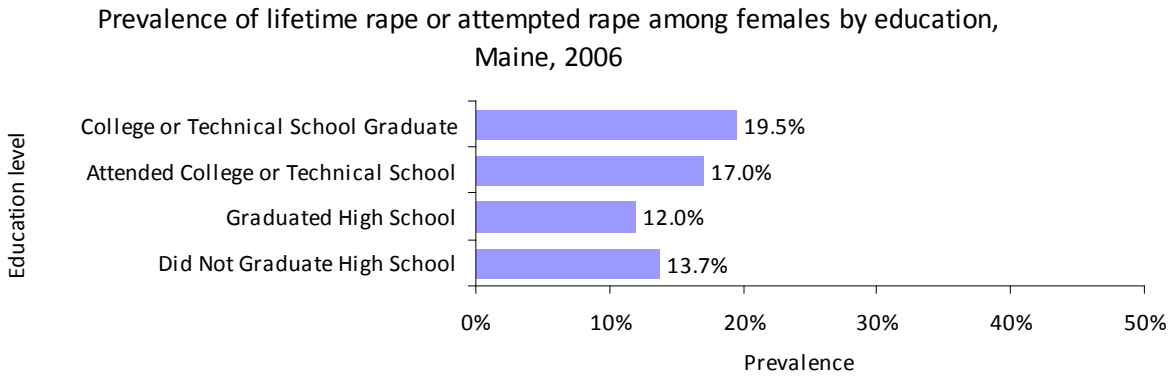
Age Group	%	95% CI
18 - 24	16.5	(6.4, 26.7)
25 - 34	24.0	(18.3, 29.7)
35 - 44	20.8	(16.5, 25.1)
45 - 54	17.6	(14.1, 21)
55 - 64	14.6	(11.0, 18.2)
65+	5.3	(3.3, 7.3)

Source: BRFSS[7]

Education

Women with a college education were more likely than women with a high school education or less to report that they had ever been the victim of rape or attempted rape during their lifetime (Figure 4.8).[7]

Figure 4.8

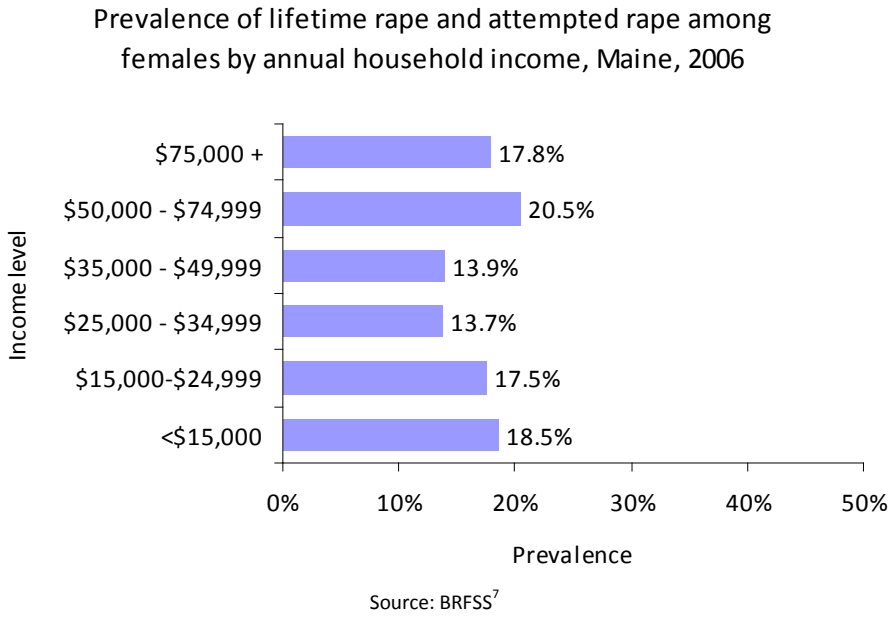


Source: BRFSS[7]

Income

There was not a statistically significant relationship between income and a woman's experience of rape or attempted rape in Maine in 2006 (Figure 4.9).[7]

Figure 4.9



Source: BRFSS[7]

Rapes Reported to Police

Another source for information about the frequency of rape in Maine is Uniform Crime Reports on rapes reported to police. In these data, rape is defined as the "carnal knowledge of a female forcibly and against her will."[9] Based on this data, about 360 rapes are reported to police each year in Maine. In 2009, there were 374 rapes reported, a rate of 5.5 per 10,000 females. Maine's rate of rapes reported to police has not consistently increased or declined over time.[9-13] It is important to note that many rapes are not reported to police. According to the National Violence Against Women Survey, only about 19% of women who disclosed that they were raped on the survey reported that rape to the police.[8]

Public Health District

Maine's rate of rapes reported to police varies by public health district. Based on data from 2005-2009, Central, Western, and York Districts had rates of rape that were statistically higher than the state average (Table 4.8).[9-13]

Table 4.8. Rapes reported to police by public health district, Maine, 2005-2009

PH Districts	Average # of rapes/year	Rate per 10,000 females	95% CI
Aroostook	9	2.4	(1.7,3.1)
Central	68	7.7	(6.9,8.5)
Cumberland	73	5.2	(4.6,5.7)
Downeast	10	2.2	(1.6,2.8)
Midcoast	29	3.8	(3.1,4.4)
Penquis	19	2.3	(1.8,2.7)
Western	80	8.0	(7.3,8.8)
York	73	7.0	(6.3,7.7)
Total	360	5.3	(5.1,5.6)

Source: Crime in Maine, 2005-2009 reports[9-13]

Adverse Childhood Experiences

Adverse childhood experiences (ACEs) are stressors during childhood that can include abuse, household dysfunction, and parental absence. Several studies have found that these types of experiences are common among children and are related to adult health outcomes including substance abuse, mental illness, suicide, cardiovascular disease, diabetes, cancer and early death.[15, 16]

Data on adverse childhood experiences among adults in Maine were collected for the first time by Maine's 2010 BRFSS survey. The survey included 11 items that assessed experiences with verbal, physical and sexual abuse and witnessing domestic violence, as well as items that assessed household functioning, such as contact with an incarcerated, mentally ill, or substance abusing household member or parental divorce or separation.

Based on these questions, over 60% of women and 57% of men reported experiencing at least one adverse childhood experience. Women were almost two times as likely as men to report experiencing at least five ACEs during childhood; one in every ten Maine adult women reported experiencing five or more ACEs (Table 4.9).[7]

More than 1 in every 4 women reported being verbally abused, lived with a household member with a mental illness, had parents who separated or divorced, or lived with a parent who abused alcohol or drugs (Table 4.9).[7] About 16% of women were physically abused, 14% witnessed domestic violence between their parents, and almost 1 in 5 were sexually abused by a person who was at least five years older or an adult. Maine's rates of adverse childhood experiences among women are similar to published findings from five other states that included the ACEs questions on their BRFSS.[17]

Maine women were more likely than men to have been sexually abused, to have lived in a household with someone with a mental illness , and to have had parents who separated or divorced (Table 4.9).[7]

Table 4.9. Prevalence of adverse childhood experiences among adults by sex, Maine, 2010

	Women		Men	
Adverse Childhood Experiences	**%**	**95% CI**	**%**	**95% CI**
Physically abused	15.9	(14.0, 17.7)	16.3	(14.0, 18.6)
Sexually abused	19.1	(17.1, 21.1)	8.1	(6.5, 9.7)
Raped	5.7	(4.6, 6.9)	2.3	(1.4, 3.2)
Touched sexually	16.7	(14.9, 18.6)	6.3	(4.9, 7.7)
Forced to touch other	11.8	(10.1, 13.6)	6.0	(4.6, 7.4)
Verbally abused	27.1	(24.9, 29.4)	26.5	(23.7, 29.3)
Witnessed domestic violence	14.0	(12.3, 15.8)	13.2	(11.1, 15.3)
Household mental illness	24.7	(22.4, 26.9)	16.1	(13.6, 18.5)
Parental separation	25.1	(22.8, 27.4)	20.7	(18.0, 23.3)
Household substance abuse	32.2	(29.9, 34.6)	28.6	(25.8, 31.4)
Alcohol abuse	29.7	(27.4, 31.9)	26.4	(23.6, 29.2)
Other drug abuse	9.4	(7.8, 11.0)	7.6	(6.0, 9.2)
Incarcerated household member	5.0	(3.8, 6.3)	5.1	(3.7, 6.5)
ACE score				
0	38.7	(36.4,41.1)	43.1	(40.0,46.3)
1	21.4	(19.3,23.4)	22.3	(19.8,24.8)
2	14.6	(12.7,16.5)	12.9	(10.7,15.2)
3	8.7	(7.3,10.0)	8.8	(7.1,10.5)
4	6.6	(5.3,7.8)	7.3	(5.6,9.0)
5+	10.1	(8.5,11.7)	5.5	(4.1,6.9)

Source: BRFSS[7]

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Chapter 5: Mental Health

Introduction

A person's gender and/or sex can impact the presentation and prevalence of mental illness due to differences in environmental, social, hormonal, and physiological factors.[1] The toll mental illness takes on women and their families is emotional, physical and financial. Women struggling with mental health conditions are more likely to limit beneficial activities such as exercise and to engage in health risk behaviors such as cigarette smoking and heavy alcohol use.[2, 3] In the U.S., mental illnesses cost billions of dollars each year in direct health costs, lost wages, decreased productivity, relapse, and suicide. Mental illness may also affect women's health indirectly as women are more often the caregivers for family members struggling with mental illness.[1] The biggest challenge for many women suffering with a mental health disorder in Maine is finding and accessing affordable, effective treatment.[4]

Health-related Quality of Life

Health-related quality of life (HRQOL) refers to the perception of one's health, both mental and physical. Although HRQOL is broad and subjective, research has demonstrated that self-assessed health can be a stronger predictor of illness and mortality than more objective measures of health.[5] HRQOL measures can be used to assess the burden of illness and identify vulnerable subpopulations. For women, HRQOL data can capture the effects of health risks not traditionally assessed in health surveys, such as child-bearing, parenting, violence, and caregiving.[5] The following section examines responses to three HRQOL questions on Maine's Behavioral Risk Factor Surveillance System (BRFSS):[6]

1. Now thinking about your mental health, which includes stress, depression, and problems with emotions, for how many days during the past 30 days was your mental health not good?
2. Now thinking about your physical health, which includes physical illness and injury, for how many days during the past 30 days was your physical health not good?[6]
3. During the past 30 days, for about how many days did poor physical or mental health keep you from doing your usual activities, such as self-care, work, or recreation?

Prevalence

On average, women in Maine report they have about four days per month when their physical (3.8 days per month) or mental (4.1 days per month) health was not good. Each year between 2005 and 2009, there was not a statistically significant difference in the number of mentally unhealthy days per month compared to the number of physically unhealthy days per month reported by women in Maine. About 10% of women reported that poor physical or mental health prevented them from participating in their usual activities.[6]

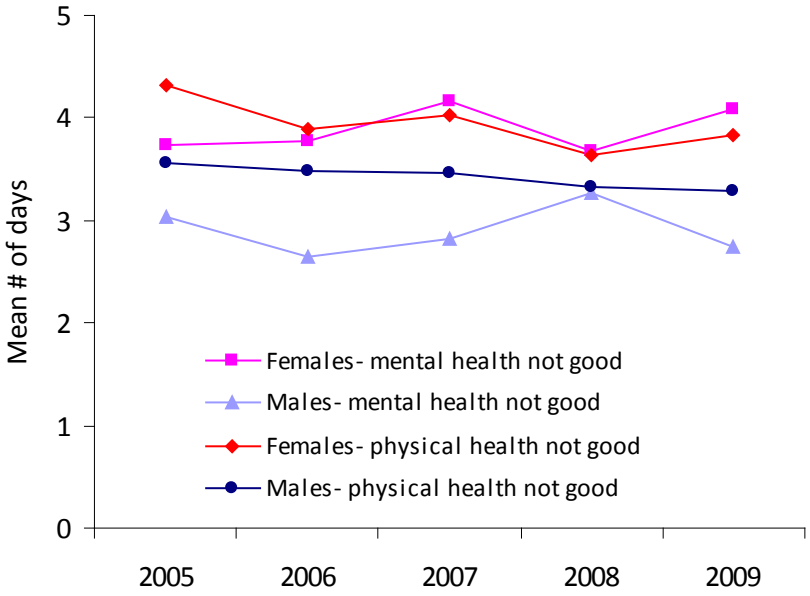
Sex

Women are more likely than men to report experiencing days when their physical or mental health was not good; the sex difference is greatest for mentally unhealthy days. In 2009, Maine

men and women reported a mean of 2.7 and 4.1 mentally unhealthy days in the past 30 days, respectively.[6] This was similar to the U.S. average number of mentally unhealthy days per 30 days (3.0 for men and 4.0 for women).[7] The difference between men's and women's mean number of physically unhealthy days is narrower and not significantly different. In 2009, the mean number of physically unhealthy days (in the past 30 days) was 3.3 and 3.8 days, respectively among men and women in Maine.[6] In the U.S. the average number of physically unhealthy days was similar: 3.2-Men, 4.0-Women.[8] Sex differences in unhealthy days remained relatively consistent between 2005 to 2009 (Figure 5.1).[6]

Figure 5.1.

Mean number of days mental and physical health not good in past 30 days by sex, Maine, 2005-2009



Source: BRFSS[6]

The percentage of Maine women and men who reported that poor mental or physical health kept them from doing their usual activities fluctuated between 2005 and 2009, with no reliable pattern emerging by sex (Table 5.1). There was no statistically significant difference in the prevalence of this indicator between men and women.[6]

Table 5.1. Prevalence of adults reporting that their mental or physical health kept them from doing their usual activities by sex, Maine, 2005-2009.

	Women		Men	
Year	%	(95% CI)	%	(95% CI)
2005	11.4	(8.4 - 14.4)	7.2	(4.4 - 9.9)
2006	7.7	(5.6 - 9.7)	9.4	(6.2 - 12.6)
2007	11.2	(8.7 - 13.6)	10.3	(6.7 - 14.0)
2008	9.8	(7.5 - 12.0)	9.9	(7.0 - 12.9)
2009	9.8	(7.7 - 11.9)	8.3	(5.8 - 10.8)

Source: BRFSS[6]

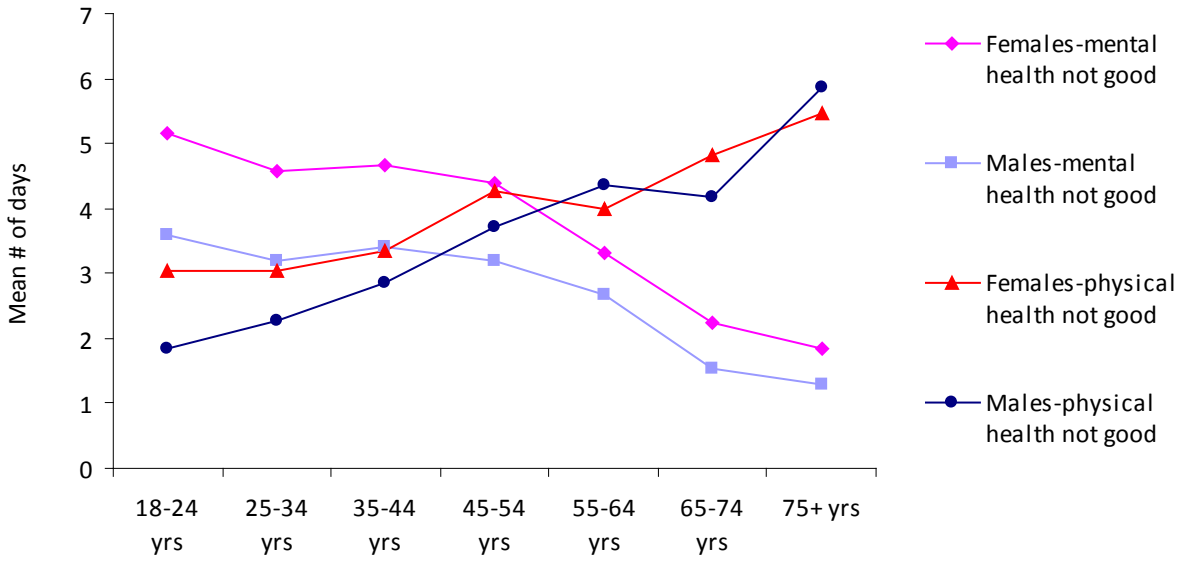
Age

As men and women age, they tend to report more days when their physical health is not good and fewer days when their mental health is not good. Conversely, younger men and women report more days when their mental health is not good, and fewer days when their physical health is not good. Between 2005-2009, women aged 18-24 years reported an average of 5.1 days per month when their mental health was not good; among women over 75 years of age, the mean number was 1.8 days per month (Table 5.2). In contrast, women over age 75 reported 5.5 physically unhealthy days per month, while women aged 18-24 years reported 3.0 days per month (Table 5.2).[6]

The sex difference in both physically and mentally unhealthy days was most pronounced among the younger age groups. As men and women age, the sex difference in self-reported healthy days decreased (Figure 5.2).[6]

Figure 5.2.

Mean number of days mental and physical health not good in past 30 days by sex and age, Maine, 2005-2009



Source: BRFSS[6]

Socio-economic Factors

Education and income were inversely related to unhealthy physical and mental health days. Women who had not graduated from high school reported more than two times the number of mentally unhealthy days and three times the number of physically unhealthy days compared to women with a college degree (Table 5.2). The same pattern was evident by income level. Women with annual household incomes less than $15,000 reported 8.4 physically unhealthy and 7.5 mentally unhealthy days on average per month. In other words, women in the lowest income bracket did not feel well at least 25% of the month. In comparison, women with household incomes of $75,000 or more reported 1.8 physically unhealthy days and 2.2 mentally unhealthy days per month; they did not feel well less than 1% of the month (Table 5.2).[6]

Public Health District

Across public health districts, the average number of days of reported poor mental and physical health was similar, between 3 and 4.5 days (Table 5.2).[6]

Table 5.2. Mean days in last 30 days that women's mental and physical health was not good by demographic characteristics, Maine, 2005–2009.

Characteristic	Mean # of days in last 30 mental health not good	Mean # of days in last 30 physical health not good
Age Group		
18-24	5.1	3.0
25-34	4.6	3.1
35-44	4.7	3.4
45-54	4.4	4.3
55-64	3.3	4.0
65-74	2.3	4.8
75+	1.8	5.5
Education		
< High School	6.2	7.3
High School	4.4	4.7
Attended College or Technical School	4.2	4.0
College or Technical School Graduate	2.7	2.6
Annual Household Income		
<$15,000	7.3	8.4
$15,000 - $24,999	5.5	5.7
$25,000 - $34,999	4.3	4.0
$35,000 - $49,999	3.7	3.2
$50,000 - $74,999	2.8	2.5
$75,000 +	2.2	1.8
Public Health District		
Aroostook	4.1	4.5
Cumberland	3.7	3.3
Central	3.9	4.0
Downeast	3.9	4.2
Midcoast	3.7	3.7
Penquis	4.1	4.4
Western	4.2	4.2
York	3.7	3.7

Source: BRFSS[6]

Depression and Anxiety

Depression and anxiety are two common mental disorders that have been associated with each other, and with other diseases.[9, 10] Women are at a greater risk for experiencing depression and anxiety than men regardless of age.[11]

Depression tends to affect those who are:[12, 13]

- Aged 45 to 64 years
- Women
- Blacks, Hispanics, non-Hispanic persons of other races or multiple races
- Persons with less than a high school education
- Divorced or separated adults
- Individuals unable to work or unemployed
- Persons without health insurance coverage

Many women face a worsening of pre-existing mental health conditions as they age or they may experience the onset of new illness for the first time. For some, this may be hormonally-triggered by menopause.[14]

Reduced productivity and increased absences from work and school are two effects of depression; it has also been associated with chronic diseases, including asthma, cardiovascular disease, diabetes and obesity.[12, 15] The exact relationship between physical and mental health is unknown, but it has been suggested that the association could be due to either physiological or behavioral factors.[15] One study found coronary heart disease to be associated with depression, regardless of confounding behavioral factors such as obesity and smoking (both of which are associated with depression and coronary heart disease).[16] Depression, anxiety and alcohol abuse also commonly co-occur.[17] Individuals with depression are more likely to smoke, be physically inactive, and drink heavily.[15] Based on data from the National Health Interview Survey, more than half of women with depression or anxiety reported current activity limitations, compared to about 30% of women without these conditions. More than 27% of women with depression and anxiety were current smokers - nearly twice the proportion of women without a mental illness.[18]

Depression affects individuals' perceptions of their overall health. According to the National Survey of Drug Use and Health, those who had a major depressive episode in the past year were more likely to say that their overall health was fair or poor, compared to those who did not have a depressive episode.[13] Other studies have shown that individuals with depression and anxiety tend to have more "unexplained" physical ailments than those without depression.[19] There is evidence that individuals who are newly diagnosed with a chronic disease may become depressed, which may also contribute to a poor physical health self-assessment.[10] The relationship between depression and physical health may be reciprocal: depression is associated with chronic illnesses, and chronic illnesses may lead to depression.

Treatment for depression includes prescription medication and talking to a medical doctor or other professional.[13] However, based on data from the 2008 National Survey on Drug Use and

Health, women are more than twice as likely as men to have an unmet need for mental health treatment or counseling.[18]

Prevalence

According to national data, 33.7% of women have ever been diagnosed with depression and 23.0% of women reported ever experiencing generalized anxiety.[18] In Maine, more than 1 in 4 (29%) women in Maine have ever been diagnosed with depression and 1 in 5 have been diagnosed with an anxiety disorder (21.0%; Table 5.3).[6]

Sex

Depression and anxiety are more common in women than men.[20-22] The reason for greater prevalence of depression among women is unknown, although response to stressful events, genetics, and hormonal differences may play a role.[10]

More women than men in Maine have been diagnosed with an anxiety disorder or depression. While the prevalence of these diagnoses has declined or remained constant in men over time, the prevalence has been increasing among women. For Maine women the prevalence of anxiety was 18.8% in 2006 compared to 21% in 2009; depression prevalence was 24.1% in 2006 and 28.6% in 2009 (Table 5.3).[6]

Table 5.3. Prevalence of anxiety disorder or depression by sex, Maine, 2006-2009.

	Been diagnosed with anxiety disorder				Been diagnosed with depression			
	Females		Males		Females		Males	
Year	%	(95% CI)	%	(95% CI)	%	(95% CI)	%	(95% CI)
2006	18.8	(16.5 - 21.1)	13.1	(10.8 -15.4)	24.1	(22.0 - 26.2)	15.4	(13.2 - 17.7)
2008	20.0	(17.7 - 22.1)	13.4	(11.1 - 15.7)	26.9	(24.5 - 29.3)	14.3	(12.0 - 16.5)
2009	21.0	(19.4 - 22.5)	11.8	(10.3 - 13.3)	28.6	(26.9 - 30.3)	15.6	(13.9 - 17.2)

Source: BRFSS[6]

Age

The percentage of Maine women with a lifetime diagnosis of depression was highest among those aged 18-64 years and lowest among those over age 65 (Table 5.4).[6] This pattern is similar to national data, which has found that the rate of depression reported by females is highest among those aged 40–59 years and lowest among those aged 60 years and older.[18] Research suggests that the lower prevalence of depression diagnosis among the elderly is not due to age, but due to a cohort effect. Attitudes of physicians and patients have changed in relation to health care seeking behaviors and later-born cohorts of women are more aggressive about seeking mental health care compared to earlier cohorts. As a result, we will likely see a shift in the age distribution of lifetime depression as younger cohorts age and continue to actively seek out mental health care.[23]

Table 5.4. Prevalence of anxiety disorder or depression by sex and age, Maine, 2006-2009.

	Been diagnosed with anxiety disorder				Been diagnosed with depression			
	Females		Males		Females		Males	
Age	%	(95% CI)	%	(95% CI)	%	(95% CI)	%	(95% CI)
18-24	28.9	(21.6 - 36.2)	17.7	(11.8 - 23.7)	31.4	(24.8 - 37.9)	15.9*	(10.5 - 21.3)
25-34	25.9	(22.6 - 29.3)	13.2	(9.7 - 16.7)	29.6	(26.2 - 33.0)	13.9	(10.2 - 17.6)
35-44	23.4	(20.9 - 25.9)	13.9	(11.3 - 16.4)	29.7	(27.0 - 32.4)	14.0	(11.5 - 16.5)
45-54	19.8	(17.9 - 21.7)	12.0	(10.1 - 13.9)	31.4	(29.1 - 33.7)	18.8	(16.4 - 21.1)
55-64	16.7	(15.0 - 18.5)	13.2	(11.3 - 15.1)	25.6	(23.5 - 27.7)	18.3	(16.1 - 20.5)
65-74	12.2	(10.2 - 14.3)	8.7	(6.6 - 10.7)	18.9	(16.4 - 21.4)	10.6	(8.3 - 12.9)
75+	9.5	(7.7 - 11.4)	5.9*	(3.6 - 8.3)	11.5	(9.5 - 13.4)	8.1	(5.5 - 10.8)

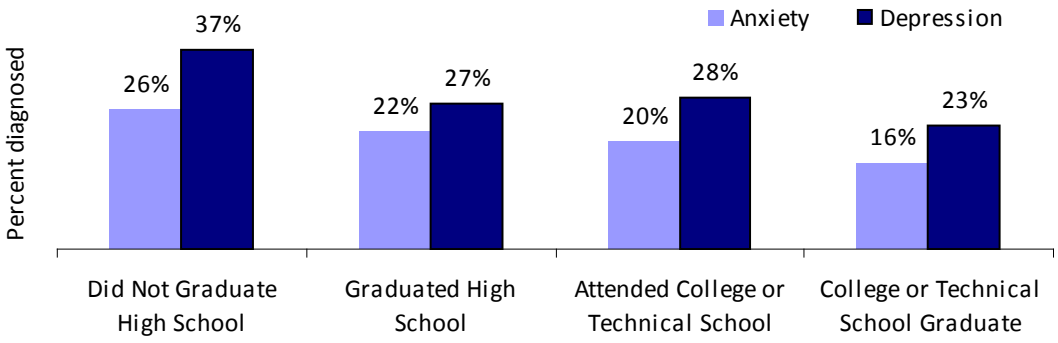
Source: BRFSS[6]
* frequency <50

Education Level

Women who did not graduate from high school were more likely to be diagnosed with anxiety or depression compared to those graduated from college or technical school (Figure 5.3). More than 1 out of every 3 women without a high school degree had ever been diagnosed with depression and 1 in 4 had been diagnosed with an anxiety disorder.[6]

Figure 5.3.

Prevalence of anxiety and depression among Maine females by education, Maine, 2006-2009



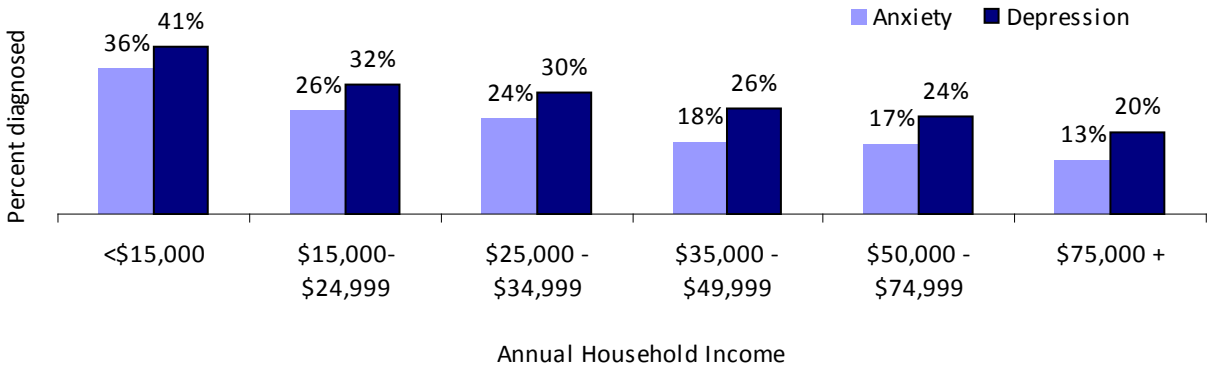
Source BRFSS[6]

Income

Research has shown that women and girls living below the poverty line are almost three times more likely to report experiencing depression compared with those living above the poverty line.[18] Similarly, in Maine, women with lower annual household income were more likely to be diagnosed with anxiety or depression compared to those with higher income (Figure 5.4); 41% of those making less than $15,000 per year and 32% of those with household incomes between $15,000-$24,999 had ever been diagnosed with depression. More than 1 in 3 women with household incomes less than $15,000 had ever been diagnosed with an anxiety disorder.[6]

Figure 5.4.

Prevalence of depression and anxiety among females by annual household income, Maine, 2006-2009



Source: BRFSS[6]

Public Health District

Across all public health districts more women than men had been diagnosed with anxiety disorder or depression. The prevalence rates of lifetime depression and anxiety were similar when comparing public health districts (Table 5.5).[6]

Table 5.5. Prevalence of anxiety disorder or depression by sex and public health district, Maine, 2006-2009.

	Been diagnosed with anxiety disorder				Been diagnosed with depression			
	Females		Males		Females		Males	
PH District	%	(95% CI)	%	(95% CI)	%	(95% CI)	%	(95% CI)
Aroostook	21.9	(16.7 - 27.0)	15.8*	(9.8 - 21.8)	28.3	(23.0 - 33.7)	13.5*	(8.3 - 18.7)
Cumberland	21.8	(18.3 -25.4)	12.8	(10.0 - 15.7)	26.9	(24.0 - 29.7)	16.8	(13.7 - 19.8)
Central	21.2	(18.0 - 24.3)	15.2	(11.5 - 18.9)	28.5	(25.2 - 31.7)	15.6	(12.3 - 18.9)
Downeast	19.7	(16.1 - 23.3)	10.8	(7.2 - 14.4)	25.3	(21.5 - 29.2)	17.3	(13.3 - 21.2)
Midcoast	17.9	(15.6 - 20.2)	12.8	(10.4 - 15.3)	26.3	(23.8 - 28.9)	16.4	(13.7 - 19.1)
Penquis	19.2	(16.3 - 22.1)	12.1	(9.1 - 15.1)	25.8	(22.6 - 29.1)	18.3	(14.4 - 22.3)
Western	19.7	(16.9 - 22.6)	12.5	(9.7 - 15.4)	28.1	(24.9 - 31.3)	11.9	(9.3 - 14.4)
York	17.3	(14.6 - 20.0)	10.8	(7.1 - 14.6)	24.0	(20.7 - 27.3)	12.4	(8.6 - 16.1)

Source: BRFSS[6]
* frequency <50

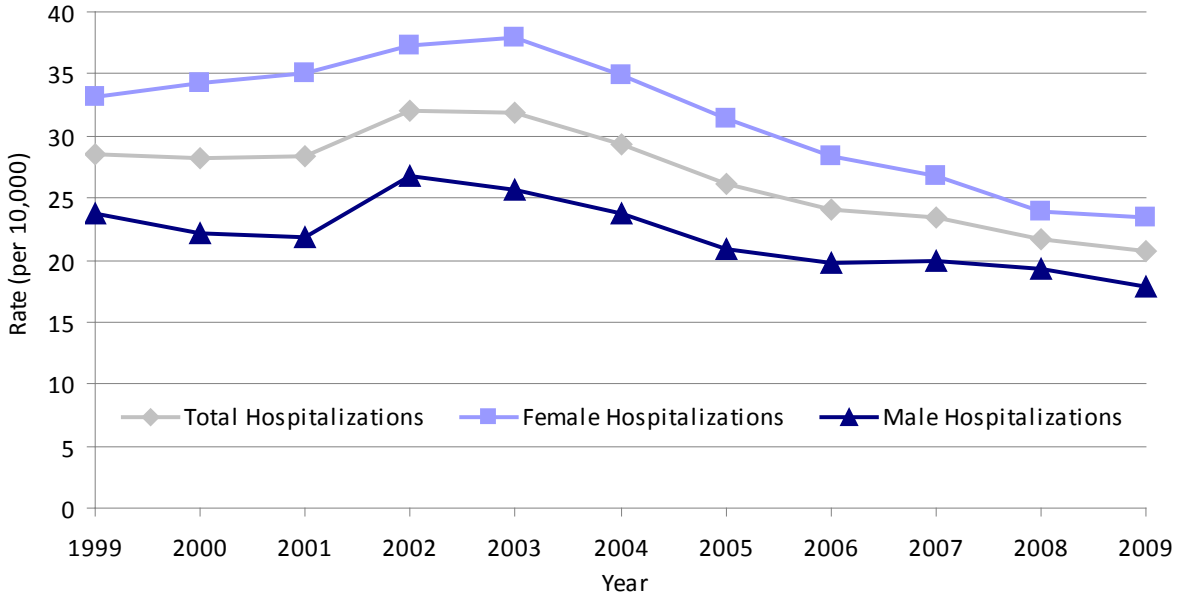
Hospitalizations

Hospitalizations for depression have declined for both men and women since their most recent peak in 2003. In Maine, this is likely due to a recent push (pursuant to the settlement of Bates vs. DHHS) towards reliance on community-level crisis services rather than hospitals.[24, 25]

Maine women were more likely than men to be hospitalized for depression between 1999 and 2009. However the gender gap in depression hospitalizations has narrowed over time (Figure 5.5).[26]

Figure 5.5.

Age-adjusted rate of hospitalizations for depression by sex and year, Maine, 1999-2009



Source: Maine Health Data Organization[26]
ICD-9 Codes: 293.83 296.20-296.36 300.4 311.0

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Chapter 6: Substance Abuse

Introduction

This chapter will focus on primarily on alcohol use among women in Maine. Data on treatment and hospitalizations for other substances are also presented.

Alcohol Use and Abuse

The blood-alcohol concentration of women tends to be higher than that of men after consuming the same amount of alcohol; this due to their lower total body water.[1, 2] As a result of these biological differences, women may develop physical health problems and feel the immediate effects of alcohol (motor skill impairment) with less alcohol than men.[3] Heavy drinking (defined as more than 1 drink per day for women, and more than 2 drinks per day for men)[4] and/or binge drinking (defined as consuming 4 or more drinks per occasion for women and 5 or more drinks per occasion for men)[4, 5] are associated with motor vehicle crashes, intimate partner violence, risky sexual behaviors, fetal alcohol spectrum disorders and chronic health conditions (alcohol dependence, liver disease, high blood pressure, heart attack, stroke, and certain kinds of cancer).[6] Approximately 79,000 deaths in the U.S. were attributable to excessive alcohol use between 2001 and 2005.[7, 8]

Women who are heavy drinkers may develop cardiovascular problems, cirrhosis and nerve damage in fewer years than men.[3, 5, 9, 10] Excessive alcohol use may also affect menstrual cycles and increase risk of early menopause, infertility, stillbirths, and premature delivery.[1, 3, 6] Consuming any amount of alcohol while pregnant, increases risk of the fetus developing physical, learning, and behavioral problems.[1, 5, 11] Women are also less likely to enter treatment for alcohol than men, which may be due to social stigma.[3]

Although excessive consumption of alcoholic beverages is associated with negative health consequences, when consumed in moderation alcohol may reduce risk of certain diseases.[6, 12] For individuals who do drink alcohol, the Dietary Guidelines for Americans 2010 recommend that beverages be consumed in moderation—up to one drink per day for women and up to two drinks per day for men.[12] Studies of moderate consumption of alcohol have shown associations with reduced risk of some cardiovascular diseases.[1, 12]

Prevalence of alcohol use and abuse

In 2009, about half (51.8%) of Maine women reported having at least one alcoholic beverage each day and about 1 in 10 (10.6%) reported binge drinking at least once in the previous 30 days. The prevalence of Maine women who reported binge drinking in the past month was similar to that of the national average, while the number of Maine women who consumed at least 1 alcoholic beverage in the past 30 days was slightly above the U.S. (Table 6.1).[13]

Sex

Maine men tend to drink more alcohol than women. According to data from Maine's Behavioral Risk Factor Surveillance Survey (BRFSS), approximately half as many women as men reported binge drinking in the past 30 days (Table 6.1).[13]

Table 6.1. Adults who consumed at least 1 alcoholic beverage in the past 30 days, or who reported binge drinking by sex, U.S. and Maine, 2006-2009.

	At Least 1 Alcoholic Beverage Past 30 Days[a]					Binge Drinking[b]				
	Maine Females		US Females	Maine Males		Maine Females		US Females	Maine Males	
Year	%	(95% CI)	Median[c] %	%	(95% CI)	%	(95% CI)	Median[c] %	%	(95% CI)
2006	52.8	(50.4 - 55.3)	49.0	63.5	(60.7 - 66.4)	-	-	-	-	-
2007	51.9	(49.9 - 53.9)	47.9	63.1	(60.7 - 65.4)	10.1	(8.6 - 11.5)	10.1	22.1	(19.9 - 24.4)
2008	53.7	(51.7 - 55.6)	47.7	64.5	(62.2 - 66.8)	11.1	(9.6 - 12.6)	10.0	20.8	(18.6 - 23.0)
2009	51.8	(50.0 - 53.7)	46.9	64.5	(62.3 - 66.8)	10.6	(9.3 - 12.0)	10.6	19.9	(17.9 - 22.0)

Source: BRFSS[13]
[a]2006-2009
[b]2007-2009
[c]Based on 51 states

Age

For both men and women, the prevalence of any alcohol consumption and binge drinking decreased with age. Maine women under 55 years of age were more likely than women over 55 years to report having had at least 1 drink of alcohol in the past 30 days. Maine women under age 44 were more likely than women over age 44 to report binge drinking in the past month. Almost one in four women aged 18-24 reported binge drinking within the previous 30 days (Table 6.2).[13]

Table 6.2. Adults who consumed at least 1 alcoholic beverage in the past 30 days, or who reported binge drinking by sex and age, Maine, 2006-2009.*

	At Least 1 Alcoholic Beverage Past 30 Days				Binge Drinking			
	Females		Males		Females		Males	
Age	%	(95% CI)	%	(95% CI)	%	(95% CI)	%	(95% CI)
18-24	52.1	(46.4 - 57.70)	62.0	(56.6 - 67.5)	23.7	(18.3 - 29.1)	38.8	(32.5 - 45.0)
25-34	58.3	(55.4 - 61.3)	70.5	(66.9 - 74.2)	17.8	(15.2 - 20.4)	31.1	(27.1 - 35.2)
35-44	62.1	(59.9 - 64.4)	67.6	(64.9 - 70.2)	14.3	(12.5 - 16.0)	25.1	(22.4 - 27.8)
45-54	56.6	(54.7 - 58.5)	65.9	(63.6 - 68.2)	9.6	(8.4 - 10.8)	20.7	(18.6 - 22.8)
55-64	51.2	(49.3 - 53.1)	62.8	(60.6 - 65.0)	4.8	(4.0 - 5.6)	11.4	(9.9 - 1.9)
65-74	44.0	(41.7 - 46.3)	56.8	(54.0 - 59.7)	2.4	(1.7 - 3.1)	7.1	(5.5 - 8.7)
75+	32.6	(30.3 - 34.9)	50.5	(46.7 - 54.4)	1.0	(0.4 - 1.3)	2.1	(1.1 - 3.2)

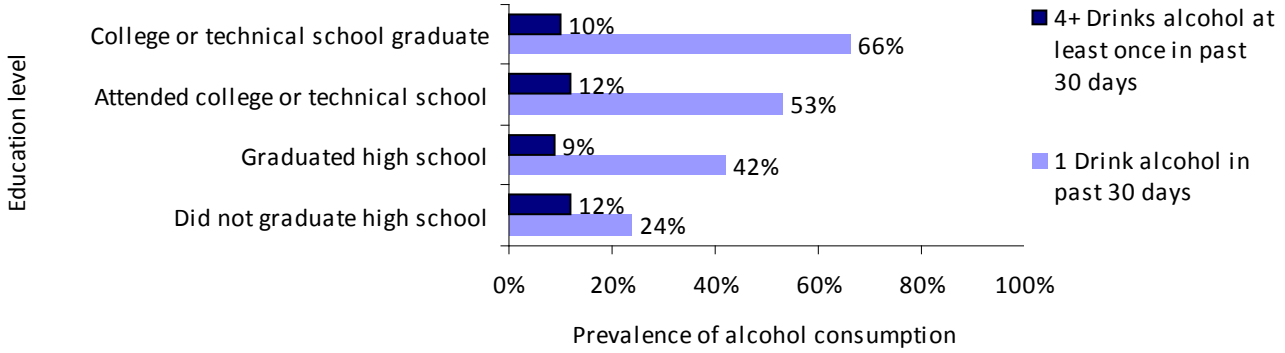
Source: BRFSS [13]
*(1 alcoholic beverage: 2006-2009, binge drinking: 2007-2009).

Education Level

Moderate alcohol consumption differed among women by level of education. Maine women who had more years of formal education were more likely to have had at least 1 alcoholic beverage in the past 30 days. There was no difference in binge drinking among women by level of education (Figure 6.1).[13]

Figure 6.1.

Prevalence of alcohol consumption among females by education, Maine, 2006-2009*



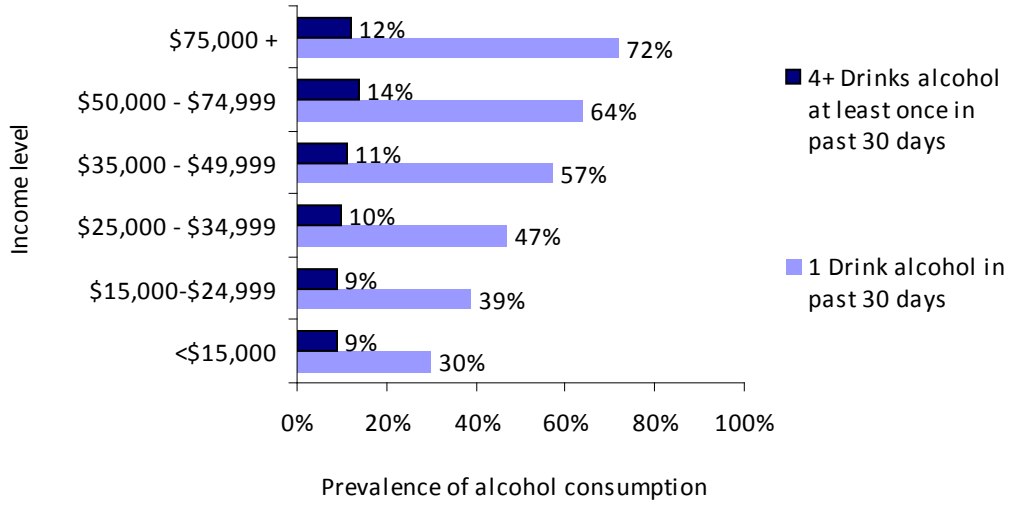
Source: BRFSS [13] *(1 alcoholic beverage: 2006-2009, binge drinking: 2007-2009).

Income

The percentage of Maine women who had at least one drink of alcohol in the past 30 days increased with higher annual household income, but similar to education, there were no statistically significant differences in the prevalence of binge drinking by income level (Figure 6.2).[13]

Figure 6.2.

Prevalence of alcohol consumption among females by annual household income, Maine, 2006-2009*



Source: BRFSS [13] *(1 alcoholic beverage: 2006-2009, binge drinking: 2007-2009).

Public Health District

Cumberland and York public health districts had the highest percentage of women reporting any alcohol consumption in the past month. These two districts also had higher binge drinking rates compared to women in other public health districts, but the differences were not statistically significant (Table 6.3).[13]

Table 6.3. Adults who consumed at least 1 alcoholic beverage in the past 30 days, or who reported binge drinking by sex and public health district, Maine, 2006-2009.*

	At Least 1 Alcoholic Beverage Past 30 Days				Binge Drinking			
	Females		Males		Females		Males	
PH District	%	(95% CI)	%	(95% CI)	%	(95% CI)	%	(95% CI)
Aroostook	39.8	(35.4 - 44.2)	58.6	(53.4 - 63.8)	8.9	(5.9 - 11.8)	17.1	(12.3 - 21.8)
Cumberland	63.2	(60.8 - 65.6)	72.2	(69.4 - 75.1)	13.1	(10.8 - 15.4)	23.7	(20.5 - 26.9)
Central	48.3	(45.4 - 51.1)	57.1	(53.3 - 60.8)	10.6	(8.3 - 12.8)	19.2	(15.7 - 22.8)
Downeast	50.2	(47.0 - 53.6)	61.1	(57.1 - 65.1)	10.4	(7.8 - 13.1)	19.2	(15.2 - 23.2)
Midcoast	55.2	(53.0 - 57.5)	65.8	(63.2 - 68.5)	8.6	(7.1 - 10.2)	20.0	(17.2 - 22.8)
Penquis	45.3	(42.4 - 48.2)	60.1	(56.6 - 63.7)	8.7	(6.8 -10.6)	23.1	(19.3 - 26.9)
Western	48.8	(46.1 - 51.5)	62.8	(59.6 - 66.1)	9.6	(7.9 - 11.4)	21.0	(17.7 - 24.2)
York	58.2	(55.2 - 61.3)	69.1	(65.8 - 72.5)	12.9	(10.0 - 15.9)	21.7	(18.1 - 25.2)

Source: BRFSS[13]

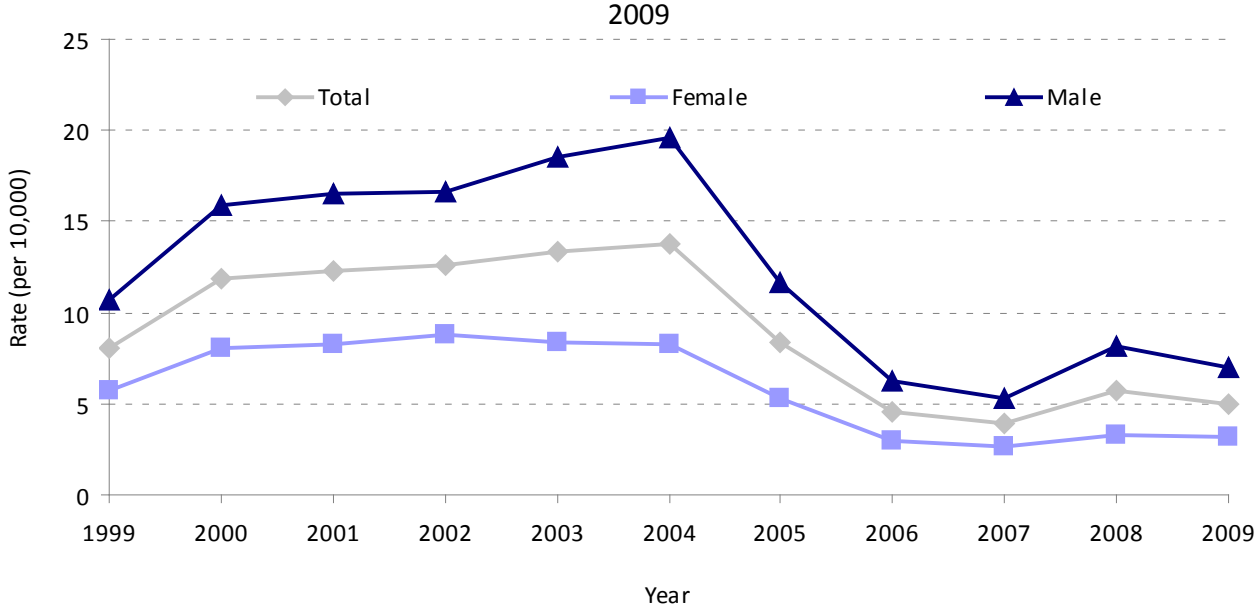
*(1 alcoholic beverage: 2006-2009, binge drinking: 2007-2009).

Alcohol-related hospitalizations

Each year between 2005 and 2009, an average of 240 women were hospitalized as the result of alcohol abuse. Over the past ten years, rates of hospitalizations related to alcohol abuse peaked for men and women in 2004 but then decreased significantly (Figure 6.3). The rate of hospitalizations for alcohol has been consistently lower among women compared to men over time, but the gap between males and females has diminished in recent years (Figure 6.3).[14]

Figure 6.3.

Age-adjusted rate of hospitalizations for alcohol by sex and year, Maine, 1999-2009



Source: Maine Hospital Discharge Data[14]
ICD-9 Codes: 303.00-303.93, 305.00-305.03

Illicit Substance Abuse

Illicit drugs include marijuana/hashish, cocaine, inhalants, hallucinogens, crack, and prescription-type psychotherapeutic drugs used for non-medical purposes. Long-term use of psychotherapeutic drugs can lead to physical dependence and addiction. Prescription drugs commonly used or abused for non-medical purposes include opioids, central nervous system depressants, and stimulants. Drug abuse can impact the course of cardiovascular disease, stroke, cancer, HIV/AIDS, hepatitis, and lung disease. Some of these effects occur when drugs are used in high doses or after prolonged use, however, some happen after a single use.[15] Women who use drugs often suffer from other health problems, sexually transmitted diseases, and mental health problems, such as depression. Substance use during pregnancy can have a significant impact of fetal growth and development.

Prevalence

Data on the prevalence of illicit substance use are not available in Maine. Based on national data, men are more likely to use illicit drugs than women. In 2008, 11.5% of adult U.S. women reported using an illicit drug within the past year. In comparison, 16.1% of adult men used at least one illicit

drug in the past year.[16] According to the 2008 National Survey on Drug Use and Health, approximately 42.9% of women aged 12 or older reported using an illicit drug at some point in their lives.[17]

Younger women are more likely to have used illicit drugs than older women. In 2008, 29.9% of U.S. females aged 18–25 years had used illicit drugs in the past year, followed by females aged 12–17 years (18.9%); past-year use was lowest among women aged 26 years and older (8.5%).[16]

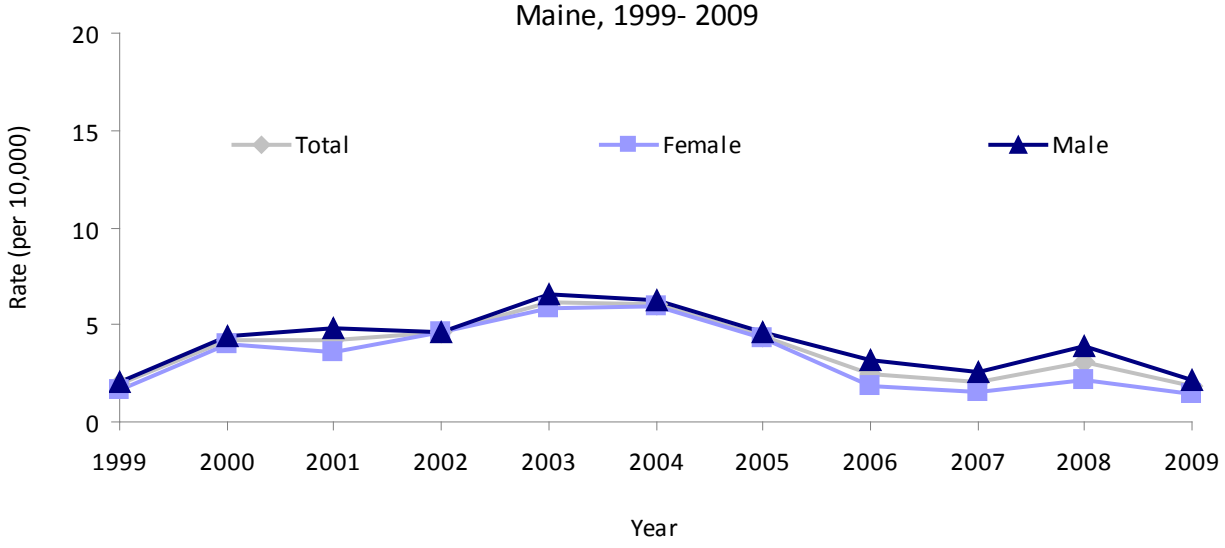
Marijuana is the most commonly used illicit drug among females of all ages, followed by the non-medical use of psychotherapeutics.[16] About 1 in 7 (13.7%) women aged 18-25 years reported using marijuana in the past year and the same percent reported non-medical use of prescription-type psychotherapeutic drugs.[16]

Hospitalizations

Each year between 2005 and 2009, an average of 137 Maine people were hospitalized as the result of opioid use. In 2009, there were 82 women and 134 men hospitalized. Over the past ten years, Maine hospitalization rates for opioid abuse have fluctuated, but the rate in 2009 was similar to the 1999 rate (Figure 6.4). The rate peaked at 5.5 per 10,000 females in 2004, but has declined since that time. Between 1999 and 2009, rate of hospitalization for opioids was similar for males and females in Maine.[14]

Figure 6.4.

Age-adjusted rate of hospitalizations for opioids, by sex and year, Maine, 1999- 2009

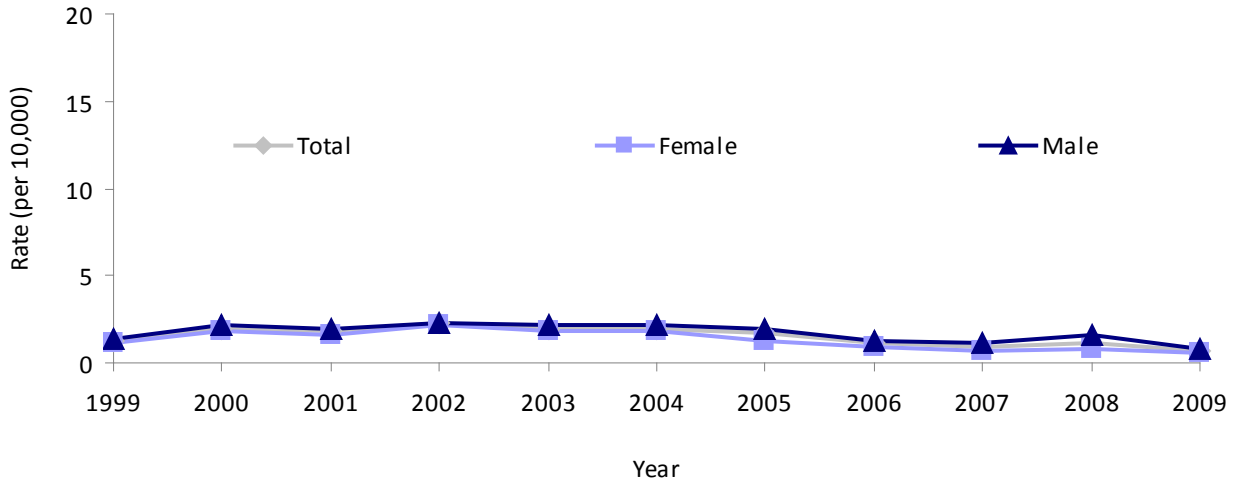


Source: Maine Hospital Discharge Data[14]
ICD-9 Codes: 304.00-304.03, 304.70-304.73, 305.50-305.53

The rate of hospitalizations for "other drugs" is lower than for opioids for both men and women. In 2009, there were 37 women in Maine hospitalized for non-opioid drug use. Rates of hospitalization for "other drugs" remained stable between 1999 and 2009 for males and females (Figure 6.5).[14]

Figure 6.5.

Age-adjusted rate of hospitalizations for "other drugs" by sex and year, Maine, 1999- 2009



Source: Maine Hospital Discharge Data[14]
ICD-9 Codes: 304.10-304.60, 304.80-304.93, 305.20-305.43,305.60-305.93.

Substance Abuse Treatment

Research has shown that comprehensive and sustained substance abuse treatment can help individuals reduce or stop the use of illegal or harmful drugs, improving their ability to function at home, at work, and in society. Attainment of a permanent drug-free state is not a guarantee for those who undertake substance abuse treatment. Relapse is common for injection drug users and those addicted to other drugs. However, substance abuse treatment has proven to be as effective as the treatments for other chronic conditions, including diabetes and asthma.[18]

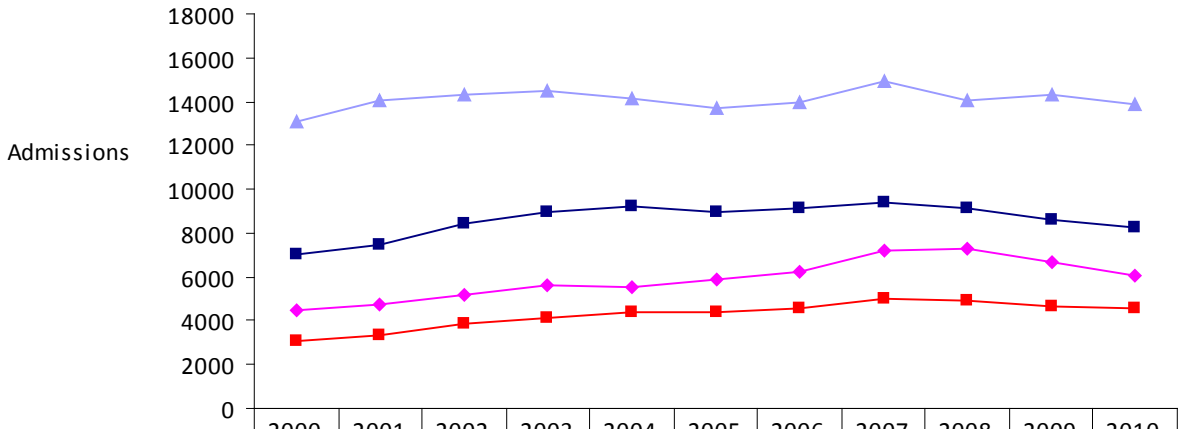
There are currently 183 Maine facilities that handle treatment for substance abuse.[19] In 2010, 4,522 Maine women were served by these facilities. The number of female clients served by Maine's treatment facilities increased 50% between 2000 and 2010.[20]

Sex

More men than women were admitted to treatment facilities in Maine between 2000 and 2010 (Figure 6.6). The pattern of admissions and clients served over this period was similar by sex.[20]

Figure 6.6.

Substance abuse treatment admissions and unduplicated client count by sex, Maine, 2000-2010



	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Female Admissions	4463	4698	5199	5625	5555	5888	6246	7183	7244	6630	6015
Female Clients	3033	3345	3876	4154	4368	4426	4571	4996	4951	4643	4522
Male Admissions	13058	14089	14284	14511	14143	13688	13941	14960	14065	14356	13859
Male Clients	6989	7438	8407	8934	9253	8993	9091	9369	9138	8626	8210

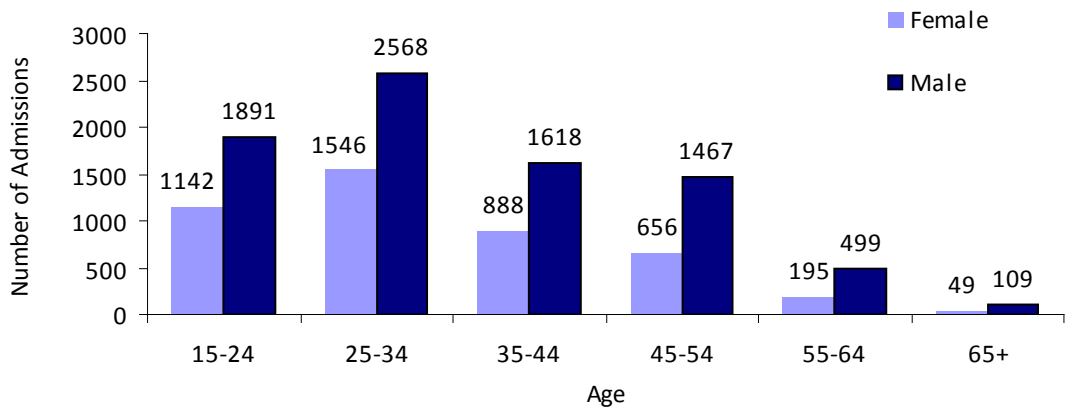
Source: Treatment Data System[20]

Age

Across all age groups, more men than women were clients at treatment facilities in 2010. The number of women at treatment facilities was highest for 25-34 year-olds (Figure 6.7).[20]

Figure 6.7.

Unduplicated substance abuse treatment admissions by age group and sex, Maine, 2010



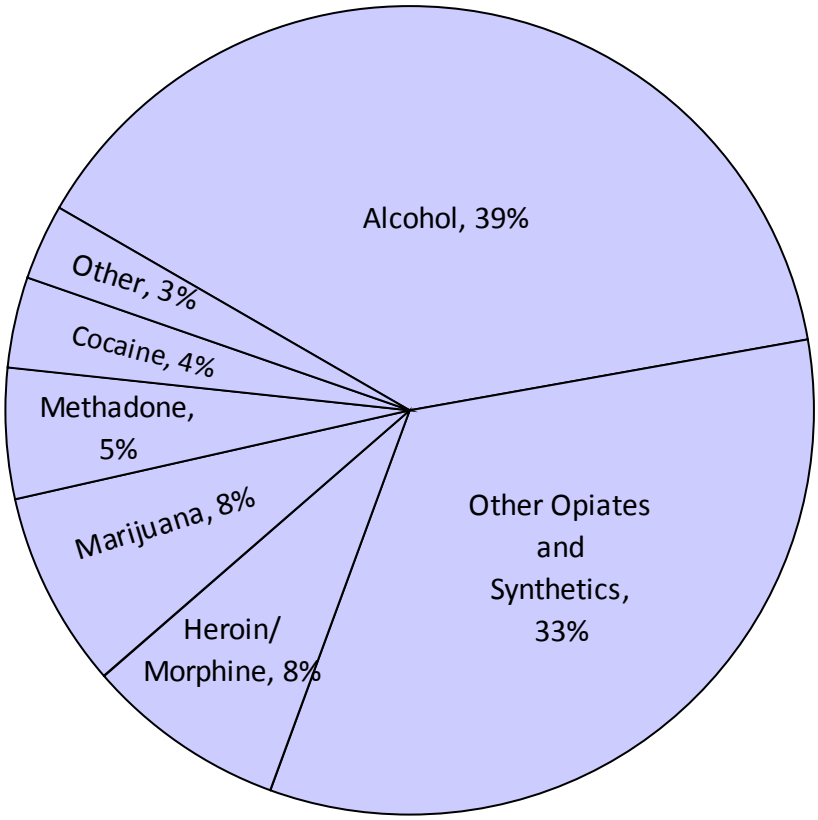
Source: Treatment Data System[20]

Drug Type

Over 70% of Maine women at treatment facilities were being treated for alcohol or other opiates and synthetics. Almost 40% were being treated for alcohol abuse, and one-third of women were being treated for other opiates and synthetic drugs (Figure 6.8).[20]

Figure 6.8.

Unduplicated substance abuse treatment center admissions
by primary drug, female clients, Maine, 2010



Source: Treatment Data System[20]

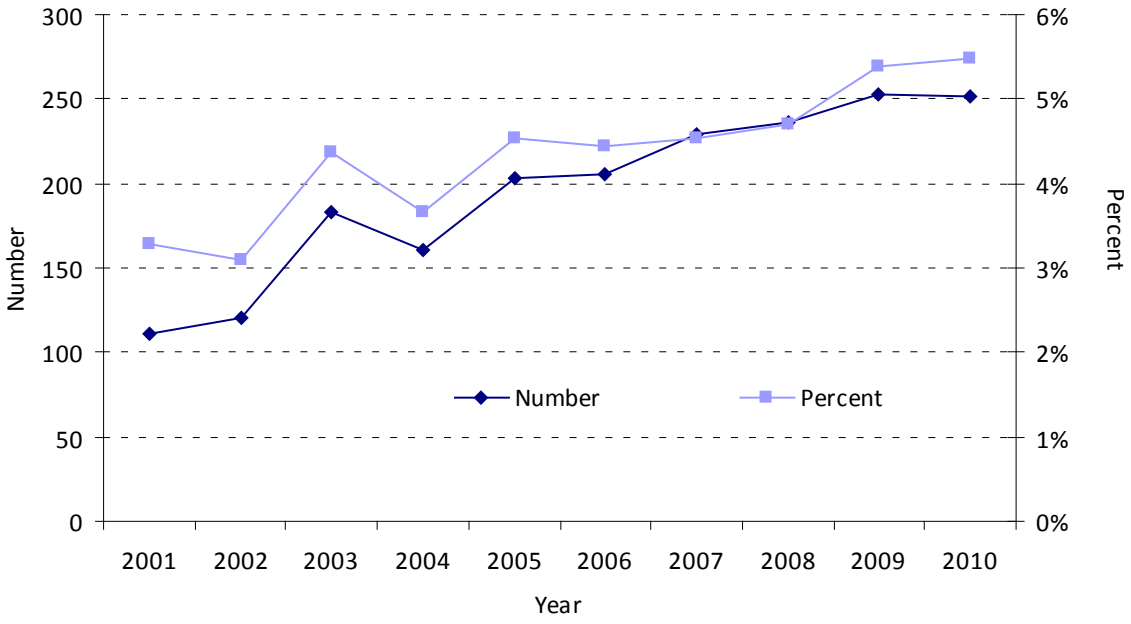
Pregnant Women

The effects of prenatal drug exposure on a child are not fully known, however studies show that the abuse of various drugs may result in premature birth, miscarriage, low birth weight, and a variety of behavioral and cognitive problems.[21]

In Maine, the percentage of women clients who were pregnant at admission to treatment facilities has increased from 3.3% in 2001 to 5.5% in 2010, a 67% increase (Figure 6.9). The actual number of pregnant clients seeking treatment increased from 111 in 2001 to 251 in 2010, a 125% increase.[20] The increase could reflect an increased number of women abusing drugs, or increased awareness by women and providers of the harmful effects of drugs in utero. It is likely that increased attention to this issue has encouraged pregnant women to seek treatment.

Figure 6.9.

Percent and unduplicated count of female clients pregnant at admission to substance abuse treatment facilities, Maine, 2001-2010



Source: Treatment Data System[20]

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Chapter 7: Health Risks and Health Promotion

Obesity, Physical Activity, Nutrition and Tobacco

Introduction

This chapter will explore health promotion and health risk behaviors in the areas of obesity, physical activity, nutrition and tobacco use. Physical activity and proper nutrition can help prevent and treat chronic diseases, such as diabetes and cardiovascular disease, as well as related risk factors, including high blood pressure, overweight and obesity. Conversely, poor nutrition, lack of physical activity are risk factors for the above conditions.[1] Tobacco use can contribute to a host of acute and chronic health problems (such as early menopause, gum disease, cancer, and osteoporosis).[2]

This chapter will present data from the Maine and U.S. Behavioral Risk Factor Surveillance Surveys (BRFSS).[3] Maine adults are compared by sex, age, income, and public health district, as well as compared to their national counterparts.

Obesity

Obesity is associated with many chronic diseases and conditions, including coronary heart disease, hypertension, high cholesterol, diabetes, post-menopausal breast cancer and osteoarthritis.[4] According to CDC guidelines, adults with a body mass index (calculated from weight and height measurements) of 25 – 29.9 are considered overweight, and adults with a Body Mass Index (BMI) of 30 or higher are considered obese.[5]

The estimated prevalence of obesity in U.S. women aged 20 years or older has been increasing steadily since the 1990's. According to national BRFSS data, the prevalence of obesity among women increased from 12.2% in 1991 to 18.1% in 1998. Between 1999 and 2009, the rate of obesity among women increased from 19.7% to 26.0%. Similar to U.S., the prevalence of obesity in Maine women has been increasing steadily over time. Obesity increased from 19.7% in 1999 to 22.3% in 2005 and 26.9% in 2009 (Table 7.1).[3]

According to the Maine BRFSS, almost 60% of Maine women were overweight or obese in 2009; of those, 30.5% of Maine women were overweight and 26.9% were obese (Table 7.1). This percentage was similar to the national average (29.8%- overweight and 26.0%-obese). BRFSS data are self–reported, so the data may underestimate the problem (Table 7.1).[3]

Table 7.1. Prevalence of overweight and obesity (BMI ≥ 25), Maine and U.S. females, 2005-09

	Overweight			Obese		
	Maine		US	Maine		US
Year	%	(95% CI)	Median % *	%	(95% CI)	Median %*
2005	30.4	(28.1 - 32.8)	29.3	22.3	(20.3 - 24.3)	24.0
2006	29.3	(27.0 - 31.6)	29.5	21.7	(19.8 - 23.7)	24.4
2007	31.1	(29.3 - 33.0)	29.7	23.6	(21.9 - 25.3)	25.9
2008	29.5	(27.7 - 31.2)	29.7	24.4	(22.7 - 26.0)	25.6
2009	30.5	(28.8 - 32.2)	29.8	26.9	(25.3 - 28.5)	26.0

Source: BRFSS[3] *Based on 51 states

Sex

In 2009, more than half (57.4%) of Maine women had a BMI ≥ 25 (they were overweight or obese); this is statistically higher than in 1999 (48.6%) and in 2005 (52.7%; Table 7.2). A greater percentage of Maine men are overweight or obese compared to Maine women (Table 7.2).[3]

Table 7.2. Prevalence of overweight and obesity (BMI ≥ 25) by sex, Maine, 2005-2009

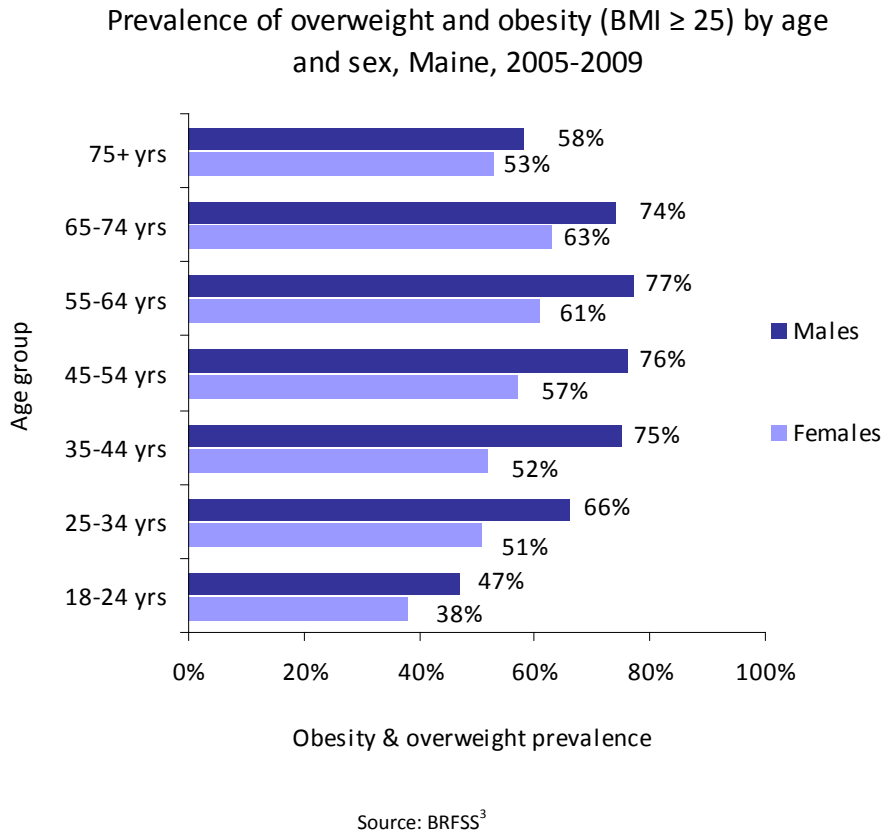
	Women		Men	
Year	%	(95% CI)	%	(95% CI)
2005	52.7	(50.2 - 55.3)	66.5	(63.6 - 69.5)
2006	51.1	(48.5 - 53.7)	68.5	(65.6 - 71.3)
2007	54.8	(52.7 – 56.8)	71.4	(69.1 - 73.6)
2008	53.8	(51.8 – 55.8)	70.0	(67.6 - 72.4)
2009	57.4	(55.5 - 59.3)	71.1	(68.9 - 73.3)

Source: BRFSS[3]

Age

Between 2005 and 2009, Maine women aged 18-24 years were less likely to be overweight or obese compared to women 25 years or older (Figure 7.1).[3] The highest rates of overweight/obesity were among women aged 45-74 years.

Figure 7.1.

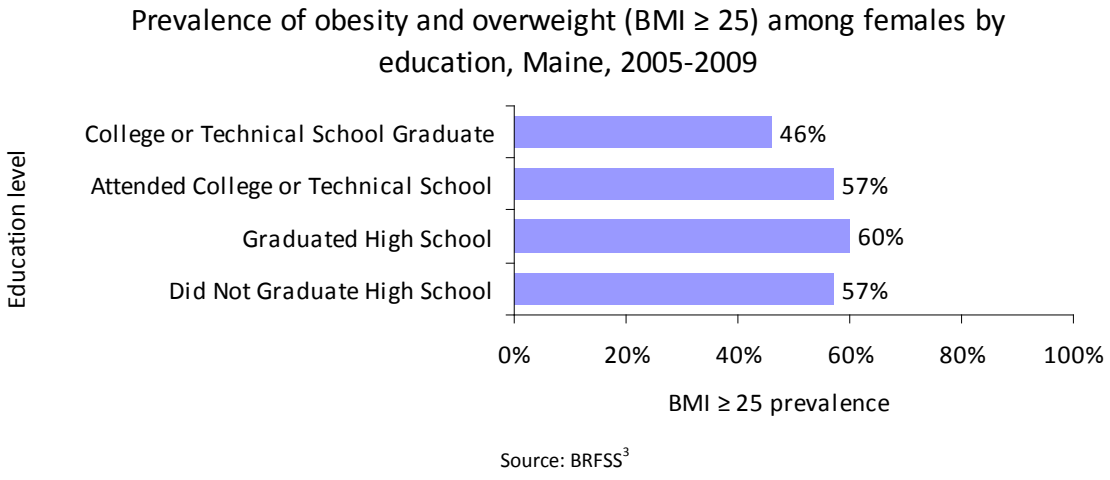


Source: BRFSS[3]

Education Level

Maine women who graduated from college were less likely than other women to be overweight or obese. Over 55% of Maine women who did not graduate from college or technical school were overweight or obese compared to 46% of women who graduated from college or technical school (Figure 7.2).[3]

Figure 7.2.

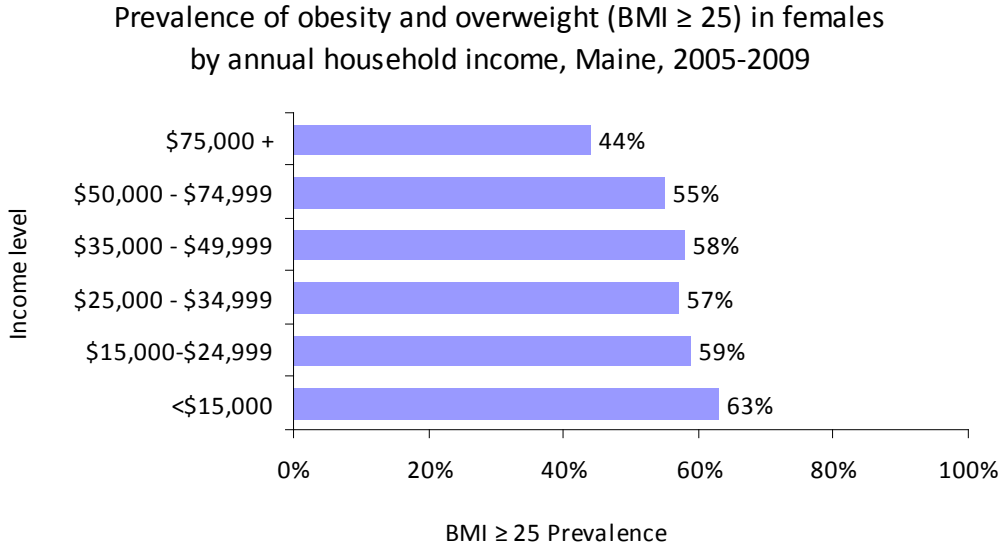


Source: BRFSS[3]

Income

The prevalence of overweight and obesity in Maine women decreased as income increased. Over half of women in all income categories were overweight or obese, except for those with annual household incomes of $75,000 or more (Figure 7.3).[3]

Figure 7.3.



Source: BRFSS[3]

Public Health District

Women in the central and northern public health districts were more likely to be overweight or obese than those in the southern and coastal districts (Table 7.3).[3]

Table 7.3. Prevalence of obesity and overweight (BMI ≥ 25) by public health district and sex, Maine, 2005-2009.

	Women		Men	
PH District	**%**	**(95% CI)**	**%**	**(95% CI)**
Aroostook	57.9	(53.7- 62.1)	71.9	(67.1 - 76.8)
Cumberland	45.6	(42.2 - 47.0)	67.4	(64.6 -70.2)
Central	60.2	(57.6 - 62.9)	68.9	(65.4 - 72.3)
Downeast	53.9	(50.7 - 57.1)	69.5	(65.7 - 73.2)
Midcoast	53.9	(51.7 - 56.0)	67.0	(63.8 - 68.8)
Penquis	57.3	(54.5 - 60.2)	73.8	(70.5 - 77.0)
Western	57.9	(55.3 - 60.5)	70.7	(66.6 - 72.7)
York	54.8	(51.9 - 57.7)	70.1	(66.9 - 73.2)

Source: BRFSS [3]

Physical Activity

Physical activity is associated with a reduction of obesity-related chronic diseases and osteoporosis; it is also associated with good mental health.[4] The USDA 2010 Dietary Guidelines for Americans recommend that adults 18-64 years old get at least 150 minutes of moderate-intensity activity per week, or 75 minutes of vigorous-intensity aerobic physical activity per week.[6]

The BRFSS includes several questions about physical activity to determine whether adults meet the recommendations for vigorous physical activity (20 or more minutes per day of vigorous physical activity three or more days per week) or the recommendations for moderate physical activity (30 or more minutes of moderate physical activity for five or more days per week). Note that the most recent year of data used in this report was 2009, so the questions used on BRFSS are based on the pre-2010 physical activity recommendations mentioned above. Moderate physical activity was defined as "brisk walking, bicycling, vacuuming, gardening, or anything else that causes small increases in breathing or heart rate." Vigorous activity was defined as, "running, aerobics, heavy yard work, or anything else that causes large increases in breathing or heart rate." Physical activity questions on the BRFSS were asked in 2005, 2007 and 2009.[3]

In 2009, over half (53.7%) of Maine women met the recommendation for physical activity compared with 48.6% of U.S. women. In 2005, 2007 and 2009, a greater proportion of Maine women participated in moderate or vigorous physical activity compared to U.S. women. (Table 7.4).[3]

Table 7.4. Females who met recommendations for moderate or vigorous physical activity, U.S. and Maine, 2005, 2007, 2009.

	Maine		US
Year	%	(95% CI)	Median % *
2005	52.7	(50.2 - 55.2)	47.9
2007	54.2	(52.2 - 56.2)	47.5
2009	53.7	(51.9 - 55.6)	48.6

Source: BRFSS[3] *Based on 51 states

Sex

In 2009, the percentage of Maine women and men who participated in moderate physical activity was similar (women: 45.6%, men: 44.8%), however men were more likely than women to participate in vigorous physical activity (women: 27.3%, men: 38.6%; Table 7.5). There was no change in the percentage of women participating in moderate/vigorous physical activity between 2005 and 2009.[3]

Table 7.5. Adults who met recommendations for moderate or vigorous physical activity by sex, Maine, 2005, 2007, 2009.

	Moderate Physical Activity				Vigorous Physical Activity			
	Females		Males		Females		Males	
Year	%	(95% CI)	%	(95% CI)	%	(95% CI)	%	(95% CI)
2005	44.7	(42.2 - 47.2)	43.1	(40.1 - 46.2)	26.7	(24.5 - 28.9)	35.2	(32.2 - 38.3)
2007	45.8	(43.7 - 47.8)	45.5	(43.0 - 48.0)	27.5	(25.6 - 29.5)	36.7	(34.2 - 39.2)
2009	45.6	(43.7 - 47.5)	44.8	(42.4 - 47.2)	27.3	(25.6 - 29.1)	38.6	(36.2 - 41.0)

Source: BRFSS[3]

Age

The percentage of Maine women who met the recommendations for moderate physical activity was similar across age groups spanning 18-74 years, but the percentage was lower among those over age 75 years. Almost half (47.9%) of women aged 18-74 years met the recommendations for moderate physical activity, compared to less than one third (29.8%) of women over age 75. Younger women were more likely than older women to engage in vigorous activity; participation in vigorous activity declined steadily with age. Almost 40% (37.6%) of women aged 18-24 years engaged in vigorous physical activity on a regular basis, compared to 19.3% of those aged 65-74 years, and 9.8% of those over age 75 (Table 7.6). The age pattern was similar for men and women.[3]

Table 7.6. Adults who met recommendations for moderate and vigorous physical activity by age and sex, Maine, 2005, 2007, 2009.

	Moderate Physical Activity				Vigorous Physical Activity			
	Females		Males		Females		Males	
Age	%	(95% CI)	%	(95% CI)	%	(95% CI)	%	(95% CI)
18-24	47.9	(41.3 - 54.5)	50.8	(43.9 - 57.6)	37.6	(31.2 - 44.0)	53.9	(47.0 - 60.7)
25-34	48.9	(45.3 - 52.5)	46.8	(42.3 - 51.3)	34.2	(30.9 - 37.5)	40.2	(35.8 - 44.6)
35-44	48.2	(45.5 - 50.9)	44.0	(40.6 - 47.4)	32.1	(29.5 - 34.6)	39.7	(36.4 - 43.0)
45-54	47.6	(45.3 - 49.9)	40.6	(37.8 - 43.3)	27.6	(25.6 - 29.7)	33.7	(31.0 - 36.4)
55-64	45.8	(43.5 - 48.1)	44.5	(41.7 - 47.3)	24.7	(22.7 - 26.7)	31.0	(28.4 - 33.5)
65-74	43.6	(40.6 - 46.5)	45.0	(41.3 - 48.6)	19.3	(17.0 - 21.5)	31.9	(28.4 - 35.3)
75+	29.8	(26.9 - 32.7)	41.1	(36.5 - 45.8)	9.8	(7.9 - 11.7)	22.9	(18.9 - 26.9)

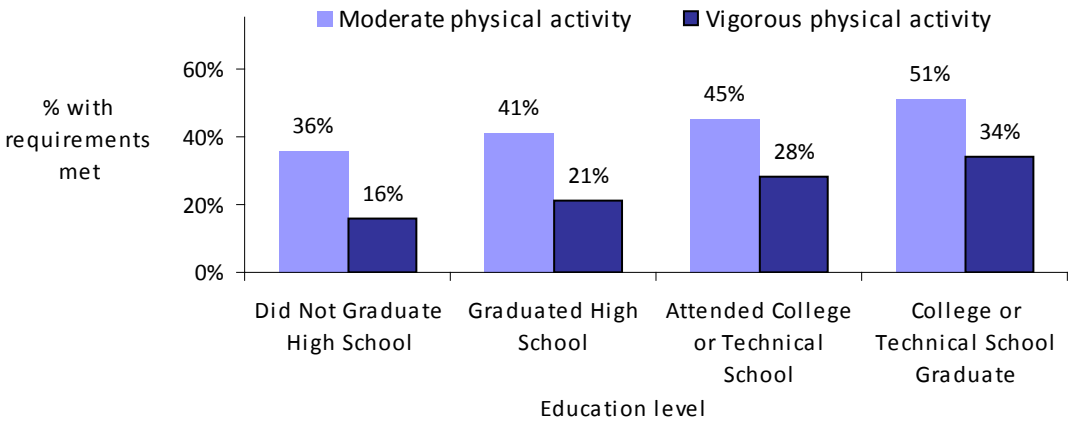
Source: BRFSS[3]

Education Level

The percentage of Maine women who met both moderate and vigorous physical activity recommendations increased with level of education (Figure 7.4). Among women who did not graduate from high school, 36% reported meeting the recommendations for moderate physical activity and 16% reported meeting the recommendations for vigorous physical activity compared to 51% and 34% of college/technical school graduates, respectively.[3]

Figure 7.4.

Females who met requirements for moderate or vigorous physical activity by education, Maine, 2005, 2007, 2009



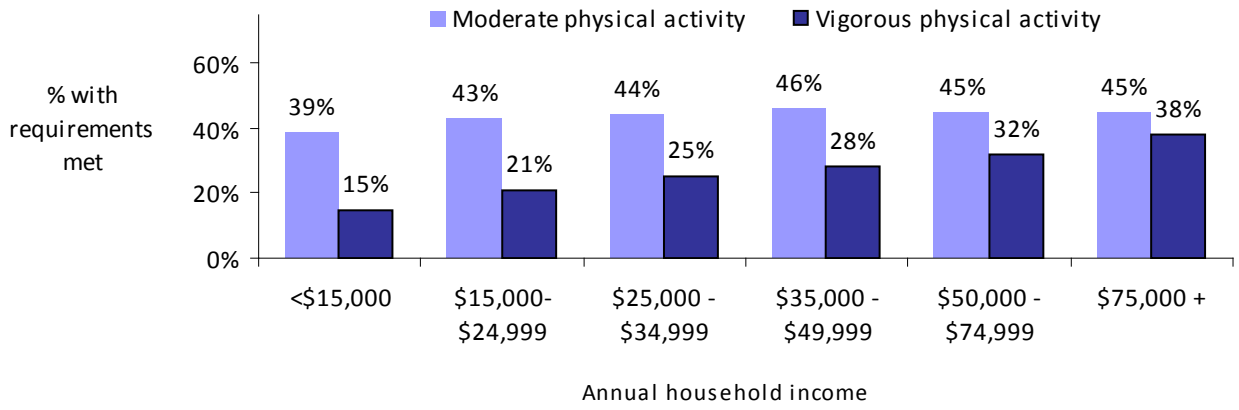
Source: BRFSS[3]

Income

The percentage of Maine women who met the recommendations for moderate physical activity did not vary by level of income. However, the percent who met the recommendations for vigorous physical activity increased steadily with income (Figure 7.5). About 15% of women who reported a household income of less than $15,000 reported regular vigorous physical activity compared to 38% of women who reported household incomes greater than $75,000.[3]

Figure 7.5.

Females who met requirements for moderate and vigorous physical activity by income, Maine, 2005, 2007, 2009



Source: BRFSS[3]

Public Health District

Women in the southern and coastal districts in Maine were more likely to participate in vigorous physical activity. Prevalence of moderate physical activity among women was similar throughout the state (Table 7.7).[3]

Table 7.7. Adults who met recommendations for moderate and vigorous physical activity by public health district and sex, Maine, 2005, 2007, 2009.

	Moderate Physical Activity				Vigorous Physical Activity			
	Females		Males		Females		Males	
PH District	%	(95% CI)	%	(95% CI)	%	(95% CI)	%	(95% CI)
Aroostook	43.9	(38.6 - 49.3)	40.5	(34.0 - 47.1)	21.0	(16.9 - 25.1)	33.4	(26.9 - 39.8)
Cumberland	49.2	(46.1 - 52.3)	44.1	(40.3 - 47.8)	32.7	(29.8 - 35.6)	39.9	(36.2 - 43.6)
Central	46.2	(42.9 - 49.5)	41.1	(36.6 - 45.7)	24.0	(21.2 - 26.7)	33.9	(29.3 - 38.5)
Downeast	46.7	(42.7 - 50.8)	49.0	(43.8 - 54.1)	25.0	(21.5 - 28.5)	34.9	(30.0 - 39.8)
Midcoast	46.2	(43.4 - 48.9)	50.3	(47.0 - 53.6)	27.8	(25.2 - 30.4)	40.5	(37.2 - 43.8)
Penquis	41.0	(37.3 - 44.6)	46.3	(41.8 - 50.8)	26.0	(22.6 - 29.3)	35.3	(30.9 - 39.6)
Western	43.7	(40.4 - 47.0)	42.7	(38.7 - 46.6)	24.4	(21.5 - 27.2)	36.7	(32.7 - 40.6)
York	44.4	(40.8 - 48.0)	44.3	(39.9 - 48.7)	29.8	(26.4 - 33.3)	36.7	(32.4 - 41.0)

Source: BRFSS[3]

Nutrition

Nutrition is associated with both reduced risk and increased risk of some diseases and conditions. The benefits associated with a healthful eating (as recommended by the Dietary Guidelines for Americans), include:[7]

- Decreased risk of chronic diseases, such as type 2 diabetes, hypertension, and certain cancers
- Decreased risk of overweight and obesity
- Decreased risk of micronutrient deficiencies

Poor diet (nutrient deficiencies as well as excesses and imbalances in diet composition) is associated with increased risk of diseases including cardiovascular disease, hypertension, type 2 diabetes, osteoporosis and some types of cancer.[6]

Nutrition is especially important for pregnant or breastfeeding women, as their demands for essential nutrients will be higher during this critical time. All the nourishment for the developing baby comes from the mother, either through the foods she eats or the supplements she takes.[4]

It is also critical for women be knowledgeable about proper nutrition because they often control the eating habits of their children. The 2010 Dietary Guidelines for Americans recommend that adults consume 2.5 cups of vegetables and 2 cups of fruits every day, although the amount varies depending on age, sex and physical activity.[6]

In Maine, about one in three (34.2%) women consumed five or more servings of fruits and vegetables per day in 2009. This is higher than the U.S. average of 27.7%. In 2005, 2007, and 2009 Maine women were more likely than U.S. women to consume five or more servings of fruits and vegetables per day.

Sex

Maine women are more likely than Maine men to consume the recommended servings of fruits and vegetables each day (Table 7.8).[3]

Table 7.8. Adults who consumed 5+ fruit and vegetable servings per day by sex, U.S. and Maine, 2005, 2007, 2009.

	Maine Females		US Females	Maine Males	
Year	%	(95% CI)	Median % *	%	(95% CI)
2005	35.5	(33.2 - 37.8)	28.1	21.2	(18.7 - 23.7)
2007	34.9	(32.9 - 36.9)	28.8	21.8	(19.8 - 23.8)
2009	34.2	(32.5 - 36.0)	27.7	21.2	(19.4 - 23.1)

Source: BRFSS[3] *Based on 51 states

Age

Maine Women over the age of 75 were more likely than younger women (<age 54) to consume five or more fruit and vegetable servings per day (Table 7.9).[3] There were no other statistically significant differences in fruit/vegetable consumption by age.

Table 7.9. Adults who consumed 5+ fruit and vegetable servings per day by age and sex, Maine, 2005, 2007, 2009.

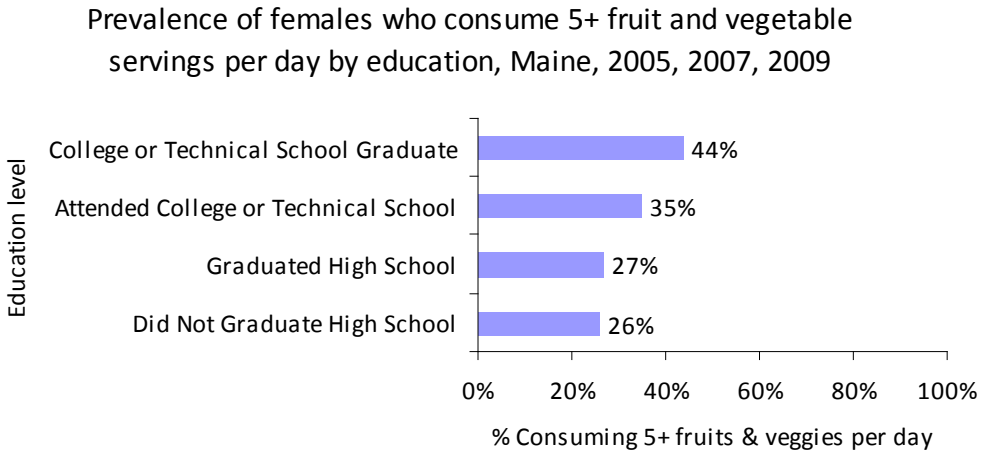
	Females		Males	
Age	**%**	**(95% CI)**	**%**	**(95% CI)**
18-24	31.9	(25.8 - 37.9)	23.9	(18.0 - 29.7)
25-34	30.4	(27.2 - 33.6)	18.0	(14.8 - 21.3)
35-44	33.1	(30.6 - 35.6)	17.2	(14.7 - 19.6)
45-54	35.5	(33.3 - 37.7)	20.3	(18.1 - 22.6)
55-64	36.6	(34.4 - 38.8)	23.3	(20.9 - 25.7)
65-74	35.9	(33.2 - 38.6)	24.1	(21.0 - 27.2)
75+	41.5	(38.5 - 44.5)	30.0	(25.8 - 34.1)

Source: BRFSS[3]

Education Level

The number of Maine women who consumed the recommended amount of fruits and vegetables increased with the number of years of education (Figure 7.6).[3]

Figure 7.6.

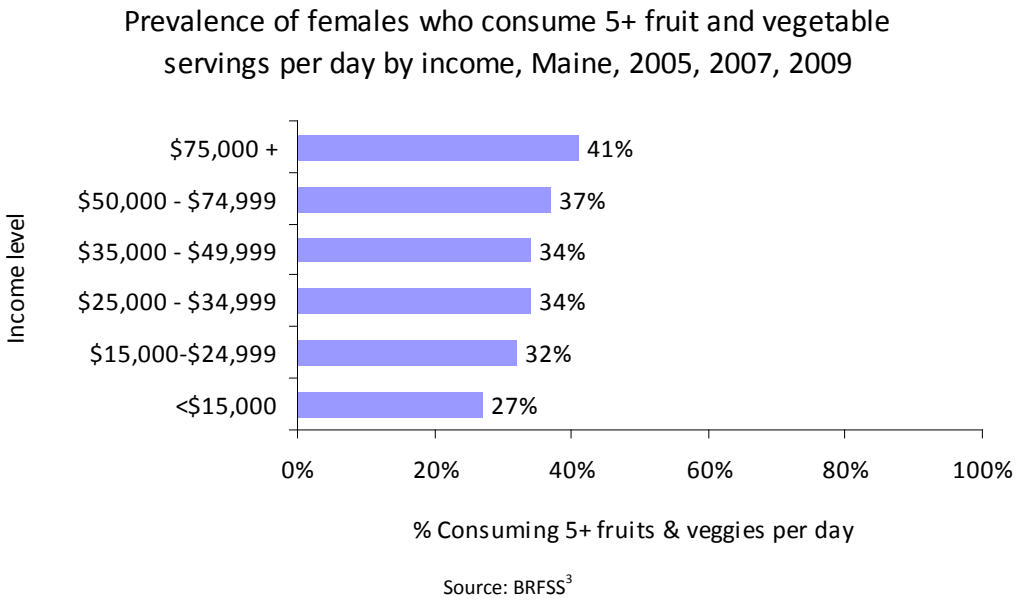


Source: BRFSS[3]

Income

The proportion of women who consumed 5 or more fruit and vegetable servings per day increased with higher annual household income (Figure 7.7).[3]

Figure 7.7.



Source: BRFSS[3]

Public Health District

Women in southern and coastal public health districts of Maine tended to eat more fruits and vegetables per day than central and northern districts. In Aroostook and Central districts, 28.3% and 29.9% of women reported consuming 5 or more servings of fruits and vegetables per day. Comparatively, 41.5% and 35.0% of women in Cumberland and York districts reported consuming the recommended daily amount of fruits and vegetables (Table 7.10).[3]

Table 7.10. Adults who consume 5+ fruit and vegetable servings per day by public health district and sex, Maine, 2005, 2007, 2009.

	Females		Males	
PH District	**%**	**(95% CI)**	**%**	**(95% CI)**
Aroostook	28.3	(23.8 - 32.7)	18.4	(13.0 - 23.9)
Cumberland	41.5	(38.5 - 44.4)	23.2	(20.2 - 26.2)
Central	29.9	(27.0 - 32.8)	18.7	(15.2 - 22.2)
Downeast	37.5	(33.8 - 41.2)	21.1	(17.1 - 25.1)
Midcoast	37.7	(35.1 - 40.3)	23.4	(20.8 - 26.1)
Penquis	32.6	(29.1 - 36.1)	17.5	(14.2 - 20.9)
Western	31.1	(28.1 - 34.0)	22.7	(19.4 - 26.0)
York	35.0	(31.6 - 38.4)	23.0	(19.3 - 26.6)

Source: BRFSS[3]

Tobacco

Smoking is associated with a number of poor health outcomes including cancer (lung, mouth pharynx, larynx, esophagus, pancreas, uterine cervix, kidney and bladder), chronic bronchitis, chronic obstructive pulmonary disease, emphysema, heart disease, cerebrovascular disease, atherosclerosis, osteoporosis, and vision loss.[8, 9] For women, smoking can affect fertility, fetal and child development.[9]

Sex

The prevalence of Maine women who were current smokers decreased between 2005 and 2009, from 19.5% to 15.8%. More Maine men than Maine women were current smokers between 2005 and 2009. In 2009 the percentage of Maine women who were current smokers was slightly less than that of women in the U.S. (15.8% vs 16.7%). Between 2007 and 2008 there was a significant decrease in the prevalence of female smokers in Maine and the U.S. There was not a comparable drop among Maine men (Table 7.11).[3] On April 1, 2009, the largest federal tobacco excise tax increase in history went into effect, raising the excise tax for cigarettes from $0.39 to $1.01.[10] This could have contributed to the decline seen in 2008, but other survey data (e.g., National Health Interview Survey) did not find similar declines in the rate.

Table 7.11. Prevalence of current smoking in adults by sex, U.S. and Maine, 2005-2009.

	Maine Females		US Females	Maine Males	
Year	%	(95% CI)	Median % *	%	(95% CI)
2005	19.5	(17.4 - 21.6)	19.2	22.2	(19.7 - 24.7)
2006	19.9	(17.9 - 21.9)	18.4	22.0	(19.4 - 24.6)
2007	19.3	(17.5 - 21.1)	18.4	21.1	(19.1 - 23.1)
2008	15.0	(13.6 - 16.4)	16.7	21.6	(19.4 - 23.8)
2009	15.8	(14.4 - 17.2)	16.7	18.9	(16.9 - 20.8)

Source: BRFSS[3] *Based on 51 states

Age

The number of Maine women who were current smokers decreased as age increased. Approximately 27% of women between the ages of 18-24 are current smokers, compared to 10.7% of women aged 65-74 and 4.4% of women over age 75 years. Smoking rates among men and women in Maine between 2005 and 2009 were similar among most age groups, except men ages 25-34 years and those 55-64 years were more likely to report being a current smoker compared to women in those age groups (Table 7.12).[3]

Table 7.12. Prevalence of current smoking in adults by age and sex, Maine, 2005-2009.

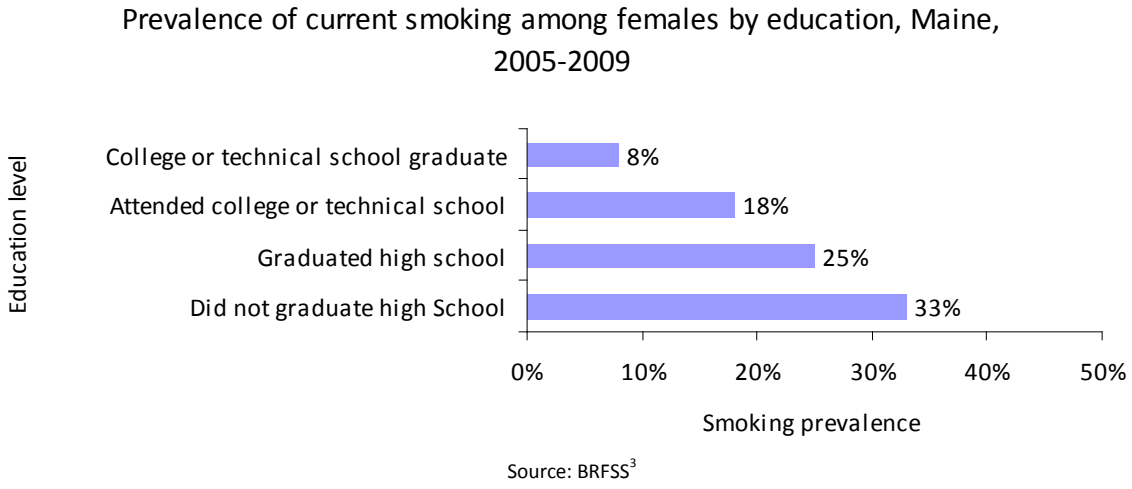
	Females		Males	
Age	%	(95% CI)	%	(95% CI)
18-24	26.7	(22.3 - 31.1)	25.6	(21.0 - 30.2)
25-34	24.3	(22.0 - 26.7)	32.7	(29.4 - 36.0)
35-44	21.2	(19.4 - 23.0)	23.9	(21.6 - 26.1)
45-54	20.2	(18.8 - 21.7)	22.5	(20.6 - 24.3)
55-64	13.4	(12.2 - 14.7)	17.1	(15.5 - 18.8)
65-74	10.7	(9.3 - 12.2)	10.5	(8.8 - 12.3)
75+	4.4	(3.5 - 5.4)	3.0	(1.8 - 4.2)

Source: BRFSS[3]

Education Level

Between 2005 and 2009, approximately 33% of Maine women without a high school degree were current smokers, compared to 8% of women who graduated from college or technical school (Figure 7.8).[3]

Figure 7.8.

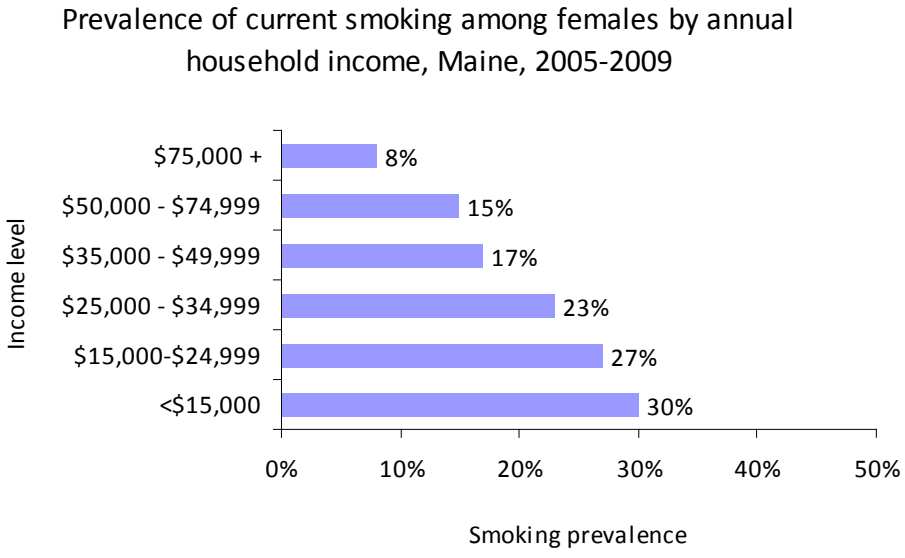


Source: BRFSS[3]

Income

The percentage of women who were current smokers decreased as income increased, from 30% of women with annual household income <$15,000, to 8% of women with annual household incomes $75,000 or greater (Figure 7.9).[3]

Figure 7.9.



Source: BRFSS[3]

Public Health District

The Cumberland public health district had significantly fewer female and male smokers (13.6% and 16.3%, respectively) compared to the other public health districts, which did not differ in their smoking rates (Table 7.13).[3]

Table 7.13. Prevalence of current smoking in adults by public health district and sex, Maine, 2005-2009.

	Females		Males	
PH District	**%**	**(95% CI)**	**%**	**(95% CI)**
Aroostook	19.8	(16.2 - 23.4)	24.9	(20.5 - 29.3)
Cumberland	13.6	(11.9 - 15.2)	16.3	(14.0 - 18.7)
Central	20.5	(18.3 - 22.7)	22.7	(19.7 - 25.7)
Downeast	18.2	(15.7 - 20.6)	22.2	(18.8 - 25.5)
Midcoast	17.3	(15.6 - 19.0)	19.6	(17.4 - 21.7)
Penquis	19.1	(16.9 - 21.4)	25.9	(22.7 - 29.0)
Western	19.8	(17.8 - 21.9)	22.2	(19.6 - 24.8)
York	18.0	(15.5 - 20.5)	19.8	(16.9 - 22.8)

Source: BRFSS[3]

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Chapter 8: Cancer Screening

Pap Smears, Mammograms, and Colorectal Screening

Introduction

Checking for cancer (or for conditions that may lead to cancer) in people who have no symptoms is called screening.[1] Screening can help doctors find and treat some types of cancer early. Generally, cancer treatment is more effective when the disease is found early.[1]

This chapter will explore the prevalence of cancer screening in Maine, particularly Pap tests, mammograms, and colorectal screenings. Data from Maine's Behavioral Risk Factor Surveillance Survey (BRFSS)[2] were used to examine various health measures in these areas.

Mammograms

In 2007 breast cancer was the most commonly diagnosed cancer among women in the U.S.[3] Mammograms take an x-ray of the breast, which is used to check for signs of breast cancer. Studies have shown that mammography screening reduces breast cancer mortality among women.[3, 4] The recommendation for regular screening varies for women by age group. The U.S. Preventive Services Task Force (USPSTF) December 2009 recommendations state that women between the ages of 50 and 74 should have mammograms every 2 years.[5] Studies have shown that this recommendation results in a 16.5% median reduction in breast cancer deaths versus those who are not screened.[6] For women aged 40-49, the USPSTF does not recommend routine mammograms, but instead suggests that the decision for screening in this age group be on an individual basis.[5] Compared to the 50-69 age group, beginning screening at 40 years reduced mortality by 3%.[6]

The percentage of Maine women aged 40 or older who had mammograms within the past 2 years was over 80% in 2006 and 2008. For those same years, the percentage of Maine women who had mammograms was higher than U.S. women (Table 8.1).[2]

Table 8.1. Prevalence of mammogram testing in females aged 40+ years in past 2 years, Maine and U.S., 2006 and 2008.

	Maine		US
Year	%	(95% CI)	Median % *
2006	81.8	(79.8 - 83.8)	76.5
2008	83.3	(81.8 - 84.8)	76.0

Source: BRFSS[2] *Based on 51 states

Age

Maine women under age 45 were less likely to have mammograms than the other age groups (Table 8.2). Over 80% of women aged 45 years and older reported having a mammogram in the past two years.[2]

Table 8.2. Prevalence of mammogram testing in females aged 40+ years in past two years by age, Maine, 2006 and 2008.

	Maine Females	
Age	**%**	**(95% CI)**
40-44	73.1	(68.9 - 77.3)
45-54	85.0	(82.9 - 87.1)
55-64	83.1	(81.0 - 85.6)
65-74	88.4	(86.0 - 90.7)
75+	80.8	(77.7 - 83.8)

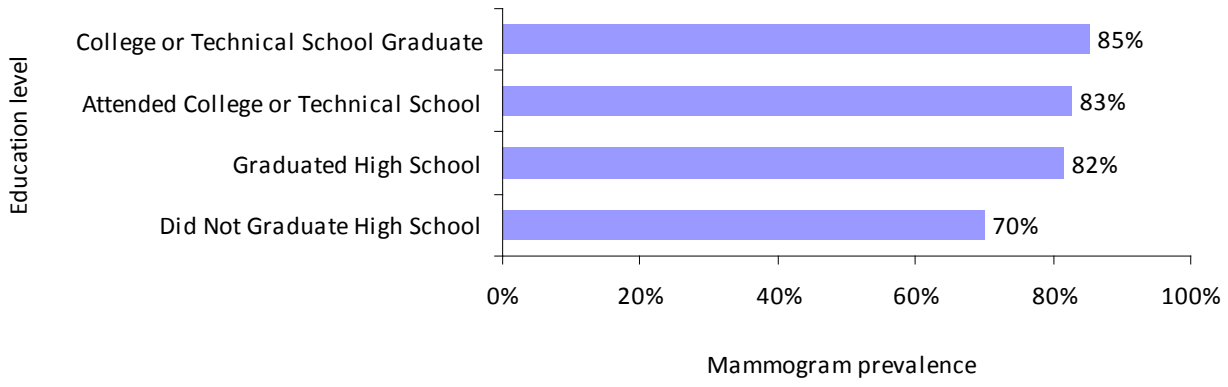
Source: BRFSS[2]

Education Level

Maine women who did not graduate from high school were significantly less likely than those with at least a high school degree to have had a mammogram in the previous two years. Only 70% of women aged 40+ who did not graduate from high school had a mammogram in the past two years, compared to over 80% of those with a high school degree (Figure 8.1).[2]

Figure 8.1.

Prevalence of mammogram testing in past 2 years by education, females 40+ years, Maine, 2006 and 2008

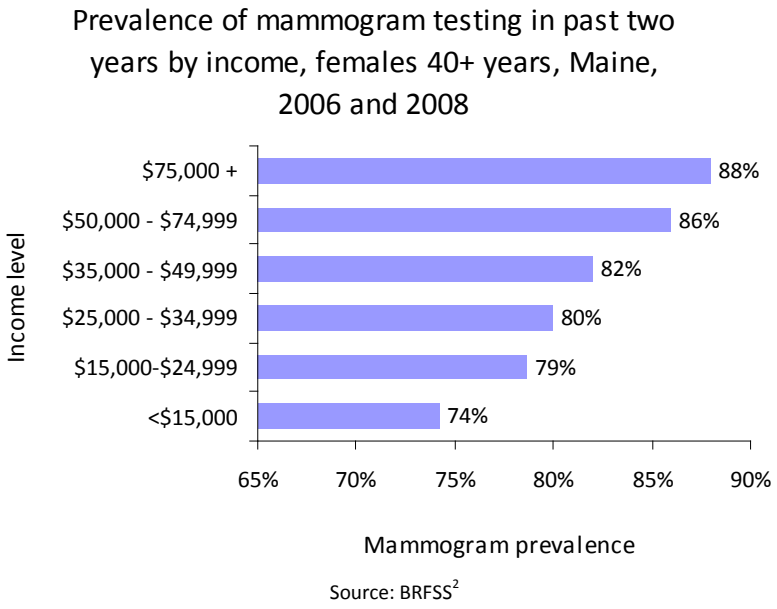


Source: BRFSS[2]

Income

The percentage of Maine women aged 40+ who had a mammogram in the past two years increased with annual household income (Figure 8.2). Women over age 40 with a household income of less then $15,000 were significantly less likely than women in other income groups to have had a recent mammogram.[2]

Figure 8.2.



Source: BRFSS[2]

Public Health District

The proportion of women over age 40 who reported having a mammogram in the past two years did not vary substantially by public health district. However, Cumberland district's prevalence of 84.7% was statistically higher than the prevalence in the Downeast district (76.6%), the district with the lowest mammography rate. Other differences were not statistically significant (Table 8.3).[2]

Table 8.3. Prevalence of mammogram testing in females aged 40+years in past two years by public health district, Maine, 2006 and 2008.

	Maine Females	
PH District	**%**	**(95% CI)**
Aroostook	85.1	(80.5 - 89.7)
Cumberland	84.7	(81.9 - 87.4)
Central	83.6	(80.1 - 87.1)
Downeast	76.6	(71.2 - 81.5)
Midcoast	79.9	(76.9 - 82.9)
Penquis	82.5	(78.9 - 86.1)
Western	83.1	(79.9 - 86.3)
York	83.3	(79.8 - 86.9)

Source: BRFSS[2]

Pap Tests

In 2010 an estimated 12,200 women in the U.S. will be diagnosed with cervical cancer and 4,210 women will die of cervical cancer.[7] Cervical cancer is treatable if caught early enough, and preventable when women are screened using a Pap test.[8]

The 2009 American College of Obstetricians and Gynecologists recommends that women aged 21-29 years be screened every two years and women 30 or older with a history of 3 negative Pap test should be screened every 3 years.[9] The U.S. Preventive Services Task Force (USPSTF) 2003 recommendations state that screening should begin within 3 years of onset of sexual activity, or age 21 (whichever comes first) and screening at least every 3 years.[10]

Over 80% of women in Maine have had a Pap test in the past three years. The percentage did not change significantly between 2006 and 2008 (89% and 86%, respectively) and was higher than the U.S. (Table 8.4).[2]

Table 8.4. Prevalence of Pap testing in females aged 18+ years in past 3 years, U.S. and Maine, 2006 and 2008.

	Maine		US
Year	%	(95% CI)	Median % *
2006	89.1	(87.4 - 90.8)	84.0
2008	86.3	(84.6 - 88.1)	82.9

Source: BRFSS[2] *Based on 51 states

Age

Older Maine women were less likely than younger women to meet the recommendations for Pap test. The prevalence of recent Pap test was lower for women over 55 years of age compared to women less than 55 years. Women over age 75 were the least likely to have had a recent Pap test compared to other age groups (Table 8.5).[2]

Table 8.5. Prevalence of Pap testing in females aged 18+ years in past 3 years by age, Maine, 2006 and 2008.

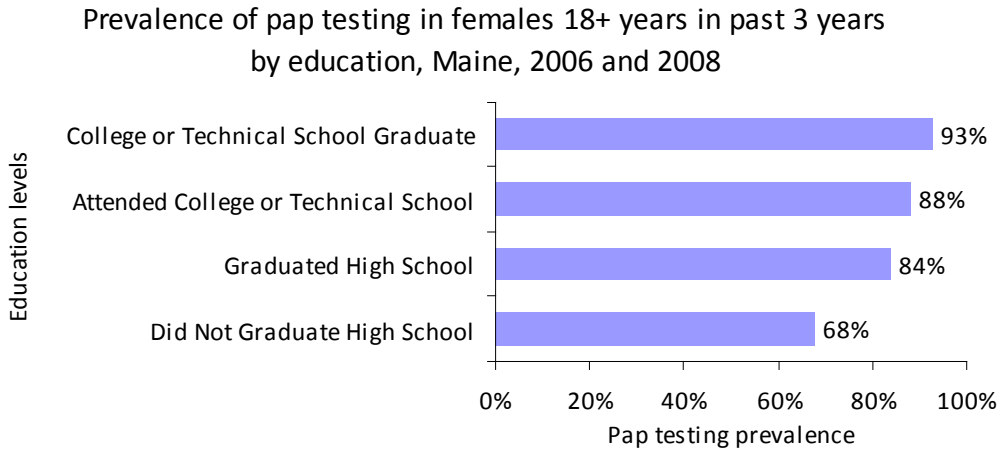
	Maine Females	
Age	%	(95% CI)
18-24	83.0	(77.2 - 88.9)
25-34	93.4	(91.1 - 95.7)
35-44	94.4	(92.8 - 96.0)
45-54	92.4	(90.6 - 94.2)
55-64	87.6	(84.9 - 90.2)
65-74	81.9	(78.4 - 85.5)
75+	58.9	(53.8 - 64.0)

Source: BRFSS[2]

Education Level

Maine women who did not graduate high school were less likely (68%) to have met the recommendations for Pap test than women who graduated high school (84%) and had higher education (88-93%; Figure 8.3).[2]

Figure 8.3.

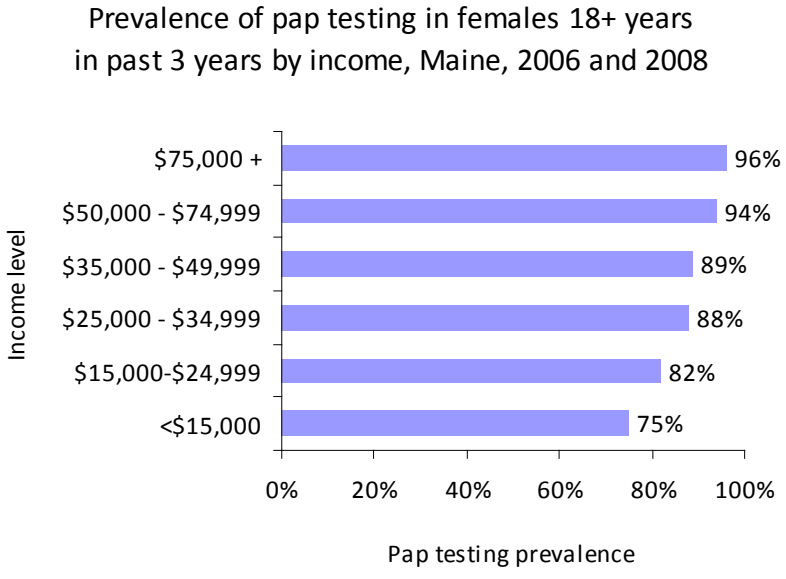


Source: BRFSS[2]

Income

The percentage of Maine women who had a recent Pap test increased with income (Figure 8.4). Women with a household income of $50,000 or more were more likely than women at other income levels to have had a Pap test in the past 3 years. Less than 4% of women with household incomes of $75,000 or more reported not having a recent Pap test in the last three years compared to 25% of women with a household income less than $15,000.[2]

Figure 8.4.



Source: BRFSS[2]

Colorectal Cancer Screening (Sigmoidoscopy/Colonoscopy)

In 2007, colorectal cancer was the third most common cancer among women, and the third leading cause of cancer death among women in the U.S.[11] Screening for colorectal cancer by colonoscopy or sigmoidoscopy may reduce colorectal mortality in adults 50-75 years of age.[12] The decision to perform colorectal screening should be made on an individual basis for those over age 75. Some studies have shown that the effectiveness of screening after age 75 does not produce the benefits that earlier detection and treatment does.[12] The U.S. Preventive Services Task Force (USPTF) 2008 recommendations state that a sigmoidoscopy should be done every 5 years and a colonoscopy be done every 10 years.[12]

Based on data from the Maine's 2008 BRFSS survey, over 70% of Maine women aged 50+ years reported having had sigmoidoscopy or colonoscopy in their lifetime.[2]

Sex

More Maine men and women had colonoscopies or sigmoidoscopies in 2008 compared with 2006. There were no sex differences in the prevalence of screenings for colorectal cancer. In 2006 and 2008 the percentage of Maine women who had colorectal screening was higher than the U.S. (Table 8.6).[2]

Table 8.6. Prevalence of lifetime sigmoidoscopy or colonoscopy in adults aged 50+ years by sex, Maine and U.S., 2006 and 2008.

	Maine Females		US Females	Maine Males	
Year	%	(95% CI)	Median % *	%	(95% CI)
2006	64.2	(61.9 - 66.5)	57.8	64.4	(60.7 - 68.1)
2008	72.1	(70.2 - 74.1)	61.9	73.1	(70.7 - 75.5)

Source: BRFSS[2] *Based on 51 states

Age

Maine men and women aged 50-54 were less likely than those in older age categories to have had colorectal cancer screening in their lifetime (Table 8.7).[2]

Table 8.7. Prevalence of lifetime sigmoidoscopy or colonoscopy in adults aged 50+ years by age and sex, Maine, 2006 and 2008.

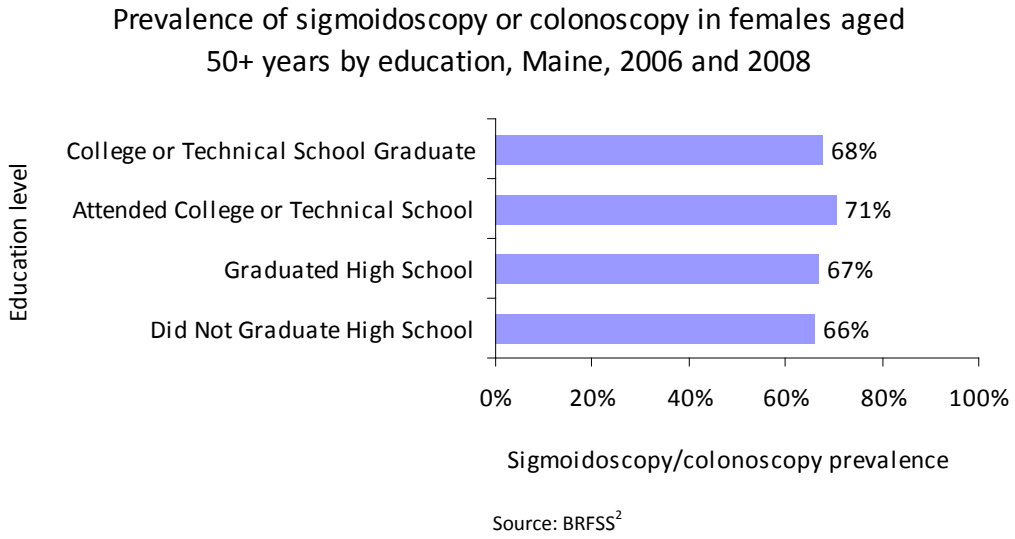
	Females		Males	
Age	%	(95% CI)	%	(95% CI)
50-54	52.9	(48.9 - 56.8)	55.7	(50.6 - 60.8)
55-64	72.3	(69.5 - 75.1)	68.7	(65.2 - 72.1)
65-74	74.4	(71.2 - 77.6)	78.7	(75.0 - 82.3)
75+	72.2	(68.6 - 75.8)	75.0	(69.6 - 80.4)

Source: BRFSS[2]

Education Level

Rates of colon cancer screening among Maine women did not vary by level of education (Figure 8.5).[2]

Figure 8.5.

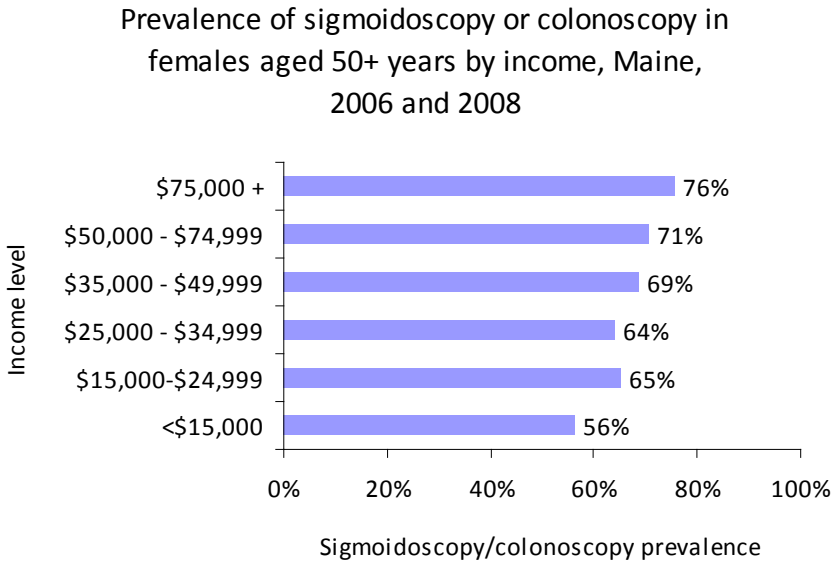


Source: BRFSS[2]

Income

Women whose annual household income was less than $15,000 were less likely to have had colorectal screening compared to women in higher income households (Figure 8.6).[2]

Figure 8.6.



Source: BRFSS[2]

Public Health District

Colon cancer screenings in Aroostook and Downeast districts, the districts with the lowest screening rates, were significantly lower than rates in Cumberland and Central districts, which had had the highest screening rates. Because of relatively small numbers in each county, caution should be used when interpreting results (Table 8.8).[2]

Table 8.8. Prevalence of lifetime sigmoidoscopy or colonoscopy in adults aged 50+ years by sex and public health district, Maine, 2006 and 2008.

	Females		Males	
PH District	**%**	**(95% CI)**	**%**	**(95% CI)**
Aroostook	59.5	(51.8 - 67.2)	60.9	(51.3 - 70.5)
Cumberland	73.4	(69.4 - 77.4)	78.5	(73.7 - 83.3)
Central	73.7	(68.9 - 78.4)	73.4	(67.5 - 79.2)
Downeast	62.9	(57.1 - 68.7)	54.7	(47.5 - 62.0)
Midcoast	64.5	(60.6 - 68.4)	68.3	(63.6 - 72.9)
Penquis	67.7	(62.7 - 72.7)	65.5	(59.0 - 72.0)
Western	69.1	(64.6 - 73.6)	63.5	(57.0 - 70.0)
York	68.1	(62.8 - 73.4)	72.1	(69.1 - 81.0)

Source: BRFSS[2]

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Chapter 9: Healthcare Access

Introduction

According to Healthy Maine 2010, a statewide health promotion and disease prevention agenda, "people who have good access to healthcare are able to obtain needed, appropriate, and high quality (evidence-based) health services in a timely manner without financial, structural, or personal barriers that limit their access."[1] For women, good access to healthcare services can mean many things throughout their lives, from adequate access to prenatal care in their childbearing years, to prescription drug access in older age. Because access is a broad concept, measurement can take many forms. This section will discuss some of the major indicators of healthcare access in Maine, such as health insurance coverage, health service utilization rates, and practitioner-to-population ratios.

Healthcare Access in Maine

Women who use the health care system frequently have higher out of pocket medical costs, and have lower average incomes compared to men, particularly during their reproductive years.[2] Because they are poorer (on average) and use more care, women must spend a greater share of their income on health care. And because they are more likely to be single parents, women also shoulder the health care costs for their children, increasing the likelihood that they will experience medical bill or debt problems.[2] Research has shown that underinsured women with medical bill or debt problems are more likely to have lower incomes and to be single with children compared to males who have medical bill or debt problems.[2]

While cost is a major barrier to access for many women, geographic distance and lack of providers also restricts women's access to health care in Maine. Despite its large geographic area with sparsely populated regions, Maine ranks 7th best nationally for its low percentage of people living in a medically under-served region (5.7% compared to U.S. percentage of 12.1%). "Medically underserved areas" are defined in terms of either the distance to health care services or the number of primary health care providers. Unfortunately, gender specific data are not available by geographic region.[3]

The standard ratio used by the U.S. Department of Health and Human Services for determining Health Professional Shortage Areas (HPSA) is a population-to-practitioner ratio of 1000 people to 1 provider. Maine currently has 44 Mental Health HPSA designated sites, 74 Dental Health HPSA designated sites, and 77 Primary Care HPSA designated sites.[4]

Women with low incomes and their families may have difficulty finding care even in areas with an adequate number of provider because many practices limit the number of Medicaid patients they accept due to low reimbursement rates.[3]

Health Care Utilization

The 2010 National Healthcare Quality and Disparity Report found that in all years between 2002 and 2007, females were less likely than males to be able to secure timely medical care, dental care or access to prescription medicines.[5] Many women do not receive the recommended level of preventative care, and one out of seven women aged 18-64 has no usual source of health care.[6] Only 79.9% of women nationally have an identified primary care provider, however this is higher than the number of men with primary care providers (72.6%).[5] Compared to other women, minority and uninsured women are even less likely to have a regular health care provider whom they see on a regular basis.[7]

Among Maine women in 2009, 7.8% reported that they did not have at least one person who they considered their personal doctor (Table 9.1). Younger women were more likely than older women to report not having a personal doctor. One in five women (20%) between the ages of 18-24 years reported that they did not have a personal doctor compared to 3.2% of women over age 65. Women with a college degree were more likely than women with a high school education or less to have a personal doctor. Women at lower income levels were less likely to have a personal doctor compared to women at higher income levels, but the differences were not statistically different.[8]

Table 9.1. Healthcare access among females by age, sex, education, and income, Maine, 2009.

Demographic Groups	% without a personal doctor		% who couldn't see a doctor because of cost	
	%	(95% CI)	%	(95% CI)
Overall	7.8	(6.6, 9.0)	10.8	(9.4, 12.2)
Age				
18-24	20.0	(11.8, 28.2)	16.8	(9.0, 24.6)
25-34	11.6	(7.7, 15.5)	15.2	(10.7, 19.7)
35-44	7.2	(5.0, 9.4)	12.4	(9.9, 14.9)
45-54	6.3	(4.7, 7.9)	14.2	(11.8, 16.6)
55-64	5.2	(3.8, 6.6)	8.7	(6.9, 10.5)
65+	3.2	(2.2, 4.2)	1.9	(1.1, 2.7)
Education				
Less than HS	10.4	(4.5, 16.3)	8.3	(4.2, 12.4)
HS or GED	9.1	(6.7, 11.5)	12.8	(10.3, 15.3)
Post HS	7.6	(5.1, 10.1)	10.7	(8.5, 12.9)
College Grad	6.5	(4.9, 6.1)	9.4	(7.2, 11.6)
Income				
< $15,000	10.9	(6.0, 15.8)	12.7	(9.4, 16.0)
$15,000-24,999	9.1	(6.0, 12.2)	17.2	(13.3, 21.1)
$25,000-34,999	8.1	(5.2, 11.0)	15.3	(11.0, 19.6)
$35,000-49,999	7.1	(5.1, 10.1)	10.6	(8.1, 13.1)
$50,000-74,999	5.4	(2.7, 8.1)	10.1	(7.0, 13.2)
$75,000 +	5.3	(2.9, 7.7)	4.2	(2.2, 6.2)

Source: BRFSS[8]

Access to care for many women may be limited due to cost. In Maine, one in ten (10.8%) women reported that in the past year they needed to see a doctor, but could not because of cost (Table 9.1). This was especially true for younger women and low income women. There was not a statistically significant relationship between education and limited health care access due to cost.[8]

Many women who require care from medical specialists were not able to gain access to these providers. Nationally in 2008, 30% of women with Medicaid surveyed by the Kaiser Family Foundation stated that they were not able to see a specialist. Similarly, 43% of women without any insurance reported being unable to obtain specialist care.[7]

Health Insurance Status

Women's health insurance status is directly linked to their health and well-being; research shows that insurance coverage is strongly associated with the ability to get needed medical care, dental care, mental health services, and prescription medication.[9] Women without health insurance are less likely to seek out preventative health care than women with health insurance.[6]

Nationally 20% of women in the U.S. report not having health insurance. In Maine, 12% of women do not have health insurance, which earns the state a rank of 11th best in the nation in terms of insuring women. The lowest rate of uninsured women is 5.2% in Massachusetts.[3] Each year between 2002 and 2007, U.S. females were less likely to be insured compared to males, but the number of women aged 18-64 without health insurance increased during this same time period.[5, 6] Employer-sponsored insurance is the leading form of coverage for women in the U.S. and in Maine, covering 59% of Maine women either through their own job or as a dependent.[10]

In 2008 and 2009 Maine women aged 19-64 had a higher percentage of enrollment in MaineCare insurance (Maine's Medicaid Program; 19%) compared to Maine men (14%) and to women nationally (11%; Table 9.2).[10] When younger females are included, the percentage (aged 0-64) enrolled in MaineCare jumps to 24% compared to 20% of Maine males and 18% of females nationally.[10]

Table 9.2. Type of health care coverage of adults aged 19-64 by sex, Maine and U.S., 2008-2009.

	Females		Males	
	Maine	**U.S.**	**Maine**	**U.S.**
Employer	59%	60%	60%	58%
Individual	6%	6%	4%	6%
Medicaid	19%	11%	14%	8%
Other Public	4%	3%	5%	3%
Uninsured	12%	20%	17%	25%

Source: Urban Institute and Kaiser Commission on Medicaid and the Uninsured estimates based on the Census Bureau's March 2009 and 2010 Current Population Survey (CPS: Annual Social and Economic Supplements).[10]

Nationally, the share of non-elderly women covered by private health insurance fell eleven percentage points to 67% over the last 25 years, while the proportion covered by Medicaid increased 5 percentage points to 11% over the same time period.[6]

Even those women who have some health insurance may be "underinsured," meaning that despite having coverage they incur out-of-pocket costs that are high when compared to their income. This is partially due to the current economy in which there was little or no growth in household incomes while health care costs rose rapidly during the same time period.[2]

Many uninsured women are remaining without coverage for longer periods of time. In 2008, more than a quarter (27%) of uninsured women in the U.S. had been without coverage for at least four years, compared to 20% of uninsured women in 2004 when the economy was stronger.[7]

Lower-income women and women of color are at greater risk for being uninsured, as are women who are single, young, and in fair or poor health.[7]

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Conclusion

This report examined women's health in Maine and the factors that contribute to women's health and well-being. The findings of this report indicate that although substantial gains have been made in ensuring women in Maine are healthy, disparities still exist and women continue to face challenges that carry health risks. In Maine, women have made great strides in educational attainment, but they still earn less than men and are more likely to live in poverty. Among Maine women, those with lower income and education are often at greater risk for poor health outcomes and are less likely to access health care.

Women's reproductive health is significant not only for women's health, but for the health of future generations. Women's health prior to and during pregnancy can impact their lifelong health outcomes, as well as their children's growth and development. In Maine it is critical that we ensure access to contraception and comprehensive reproductive services to reduce the increasing rates of sexually transmitted diseases, reduce unintended pregnancies, and ensure healthy maternal and infant outcomes. Substance use during pregnancy, including tobacco, alcohol and opioids, continues to be a concern as rates have not decreased over time.

Injuries are the leading cause of death among women of reproductive age in Maine. It is critical to improve motor vehicle safety to reduce unintentional injury death. More attention is needed to address injury-related falls among women, which can result in disabling conditions and death. Suicide and mental health are also significant concerns for women. Mental illness can have disabling consequences, limiting a woman's ability to work and take care of her health. Yet, services to address mental illness and suicide are limited in many parts of the state. The causes of mental illness among women may stem from women's status in society, burdens of work and caregiving, or violence they may experience at home. In Maine, the pervasiveness of sexual and physical violence among women during adulthood and childhood must continue to be a focus of prevention and intervention efforts, and Maine must ensure that resources are available to respond appropriately.

Maine communities, state and local governments, and the health care system must work together to promote healthy behaviors such as proper nutrition and physical activity, and strive to reduce harmful behaviors, such the use of tobacco, alcohol and other substances. Women's nutritional status and weight influence reproductive health outcomes as well as the development of chronic diseases. Dietary habits have repercussions for future generations, as women are often the primary providers of children's meals. The high prevalence of obesity among women of reproductive age in Maine is concerning for women's long-term health, pregnancy outcomes, and the health of their infants and children.

Women across the country are living longer and the population as a whole is aging. This is especially true for Maine, which has one of the oldest populations in the U.S. As our population continues to age, women's health issues will be at the forefront of our health care system. Diseases such as heart disease, cancer, stroke and diabetes are increasing in Maine as the

population ages. Educating women about prevention and recognition of symptoms will be a critical task for our health care providers. Our society needs to prepare now to prevent and manage the illnesses that women will face as they age. We also need to recognize the role that women play in caring for the older generation and how caregiving impacts physical and mental health. As the population ages, women will be relied on more and more to provide care to aging parents, possibly at the expense of their own needs.

Women often need to use the health care system more than men and face higher health care costs, but they are more likely to be poor, unemployed, work part-time or in other positions that do not offer benefits such as health insurance. Removing financial barriers to services, such as reproductive health, maternal health care, and screenings for cancer, diabetes, hypertension and heart disease, can help to ensure that women are receiving adequate and appropriate levels of care. Given the proportion people living in rural areas in Maine, access to needed services can be especially difficult for elderly women who are no longer able to drive. Services are also critical in isolated and rural areas to help women who may be in a violent relationship.

Recommendations

- **Maintain a coordinated effort to address women's health in Maine.** Maine has a public/private partnership, the Maine Women's Health Campaign (MWHC), devoted to improving the lives of women in the state. MWHC will play a vital role in coordinating women's health efforts in the state and can help develop an agenda for action.
- **Maintain strong leadership at the State.** Although Maine does not have an official Office of Women's Health, there is a Women's Health Coordinator at the Maine Center for Disease Control and Prevention who is in the position to ensure that a coordinated response to women's health issues across domains continues.
- **Ensure that health systems are able to address women's needs.** Access to quality services for women during their reproductive years and as they age can help prevent long-term illness and disability. Services related to women's mental health, reproductive health, substance abuse, domestic and sexual violence, oral health, and preventative care (i.e., cancer screening), need to be available in all parts of the state and accessible to those who need them most.
- **Encourage the health and safety of girls.** By encouraging educational attainment, providing safe homes, schools and neighborhoods, and teaching healthy behavior, Maine can decrease women's and girls' experiences with adverse childhood event, improve their status in society, and decrease their risks for long-term illness, such as obesity and tobacco use. Many chronic conditions, including mental health and substance abuse, have their root in childhood and adolescence.
- **Increase opportunities for women.** By increasing access to training and education and improving quality and access to child care, we can increase the number of opportunities available to women. By changing women's status in society, we can improve women's health.
- **Continue to monitor progress.** The last women's health report was completed almost 10 years ago. It is critical to develop a list of women's health indicators that will be tracked, analyzed and disseminated on a more frequent basis to monitor women's health and

provide data for program planning and implementation. It is also important to acknowledge the gaps in our knowledge and data. There are no prevalence data currently available in Maine on several conditions that disproportionately affect women, such as arthritis, osteoporosis and hysterectomies. In addition, we lack systematically collected information on women's experiences with caregiving, contraceptive methods, the health care setting, illicit substance use, and social isolation.

Although this report focuses on women, it is important to realize that by improving health and health care for women, we will strengthen women, their families, and our communities. As the World Health Organization noted in their 2009 report on women's health, "Improve women's health, improve the world."[1]

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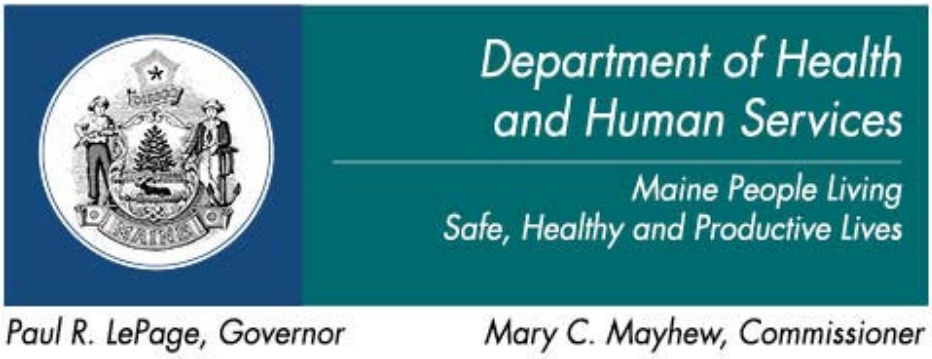

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